



City of Nogales General Plan





City of Nogales General Plan





City of Nogales General Plan



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Background and Current Conditions Volume



City of Nogales General Plan Update

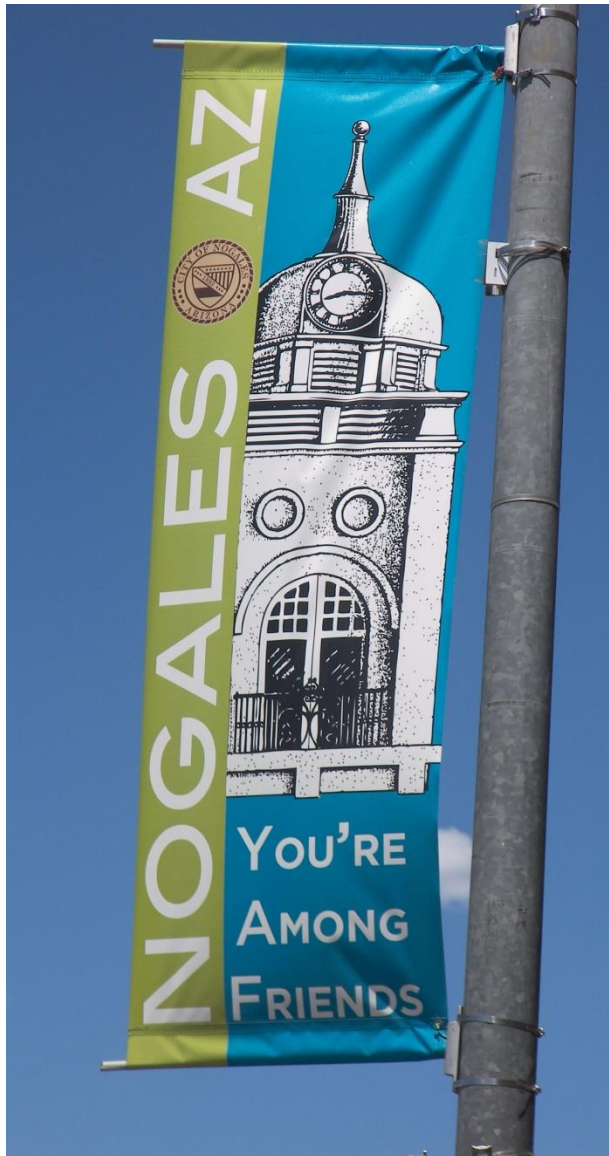


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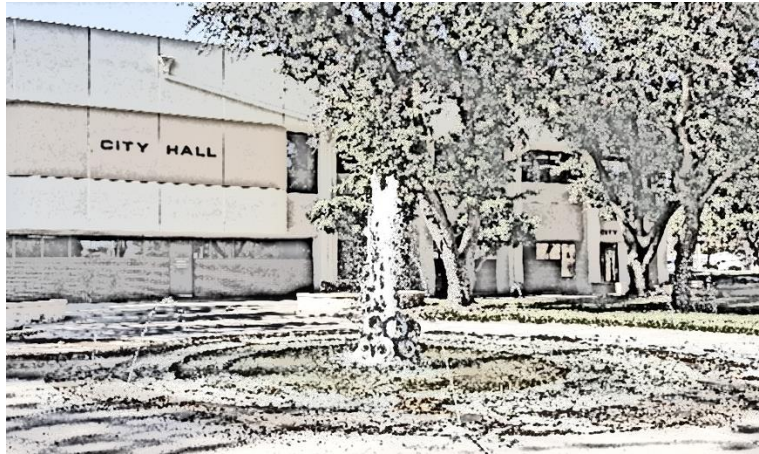
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City Hall, Nogales, Arizona, 2010

Mayor and Council

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Hector Bojorquez, Vice Mayor
Joe Diaz, Councilman
Jorge Maldonado, Councilman
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Marcel Bachelier III, Parks and Recreation Director
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INTRODUCTION

Nogales, Arizona, is a progressive city that has been able to maintain its small-town charm, rich traditions, and vibrant culture. The city is the county seat for Santa Cruz County and shares its rich heritage with Nogales, Sonora, its sister city in Sonora, Mexico.

Known in O'odham as *Nowa:l*, the name "Nogales" is derived from the Spanish word for "walnut" or "walnut tree." It refers to the large stands of walnut trees which once grew abundantly in the mountain pass between Nogales, Arizona and Nogales, Sonora. Walnut trees can still be found around the city.

In 1841, a land grant from the Mexican government to the Elias family established *Los Nogales de Elias*. In 1880, Russian immigrant Jacob Isaacson built a trading post at present-day Nogales. The U.S. Postal Service opened the Isaacson Post Office but renamed it as Nogales in 1883.

International Gateway

Located in Santa Cruz County along Arizona's southern boundary, the City of Nogales, Arizona, borders Nogales, Sonora, Mexico, and is Arizona's largest international border town. Nogales, Arizona, is a major international gateway along the United States-Mexico border. Due to the International Border, Nogales is the economic capital of the region and serves as one of the major gateways into the United States. Tourism is an important industry in the area. Visitors cross the border between both cities for site-seeing and shopping on a daily basis.

Strategic Location

Arizona is ranked first in the nation in projected job growth and economic growth prospects, and Nogales is the #1 Port of Entry in the entire Southwestern United States. Nogales is a great place to do business, providing great weather, great people, and a strategic location. As Arizona's International Gateway and the county seat and economic heartbeat of Santa Cruz County, Nogales is safe, friendly, accessible and open for business. With beautiful weather year-round and limited threat of humidity, inventory and equipment will be kept operating with little energy costs needed.

The Ambos Nogales binational region is Mexico's gateway to Arizona and the entire Western United States. Its strategic location allows companies to enjoy the advantages of accessing two labor forces, two tax systems, and two governments.



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In terms of logistics, companies in this region can utilize the Mexican ports of Guaymas. Stopping in Nogales, containers, and products are shipped throughout North America. In terms of workforce, companies can utilize wage structures in Ambos Nogales to make their operations cost competitive.

Ambos Nogales

Nogales, Arizona and Nogales, Sonora form a single, functional and complex urban fabric in which some members of the same family may live on the United States while others may reside in Mexico, creating a sense of fluidity that impacts all aspects of life, including culture, language, heritage, character, identity, context, environment and economy.

In the same manner, both cities are located in the *Ambos Nogales Watershed*, sharing similar environmental opportunities and constraints such as water quality, runoff patterns and high-risk erosion areas, making it difficult to produce quality assessments without understanding the myriad ways in which these two communities are integrally connected and interdependent. Planning efforts along the border require decision-making at the international, federal, state and local levels.

Ambos Nogales was once an easy, friendly and relaxed two-nation border town. The urban fabric is now separated by an international border, yet still Ambos Nogales remains heavily reliant on each other. Ambos Nogales continue to share their families, cultures, heritages, characters and identities. The economy of Ambos Nogales is strongly intertwined. Being a community member in Ambos Nogales provides a unique opportunity to learn the languages, cultures and traditions from both Mexico and the United States.

There is a distinctive flow of people, cultures, businesses, goods and ideas characteristic of a binational economy that makes Ambos Nogales unique. Members of Ambos Nogales, as well as tourists from both nations, frequent both sides of this international border creating an influx zone that is fluid and supports a natural constant movement from one side to the other much like the ebb and flow of waves on the shore.



"The border is what joins us/Not what separates us."
Alberto Ríos, Arizona Poet Laureate
Native of Nogales, Arizona



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The number of people that cross the Nogales port of entry on a daily basis is higher than the number of people that arrive daily at the Los Angeles Airport (LAX) or Chicago O'Hare Airport. Entrepreneurs in Nogales, Arizona, have responded to this opportunity by creating a unique binational economy that capitalizes on the number of pedestrians that visit Morley Avenue, responding to its location in a strategic manner.

Although Ambos Nogales provides unique economic and cultural opportunities, issues in Nogales, Arizona are dealt with at the federal, state and local levels. The complex level and hierarchy of decision-makers forces the City to come up with creative solutions to meet these dynamic challenges.

As a premier border community, Ambos Nogales may serve as a model for future border planning efforts. There has never been a time in Nogales' history in which so many people, governmental entities, and international countries have been looking on its border.

The General Plan

The City of Nogales General Plan is the roadmap guiding development and redevelopment within the City. This planning tool includes the vision of the community, a thorough analysis of opportunities and challenges, the policy framework guiding development within the *Designated Growth Area* and the implementation strategies necessary to implement the plan.

The General Plan serves as a guide for appointed and elected officials in the evaluation of proposals for development and redevelopment, in the identification of capital improvements projects, and in the development of more specific studies. It includes background data and current conditions and provides a policy framework for the refinement of existing implementation tools such as the zoning ordinance and the subdivision regulations. It also defines all the administrative and monitoring mechanisms necessary to administer and manage the General Plan as well as all implementation strategies needed to implement the General Plan.

The General Plan Organization

The General Plan document consists of two volumes. The *Policy Plan* volume serves as the regulatory document guiding development and includes the community vision, guiding principles, goals, policies and implementation measures. The Plan Administration and Implementation Element included in the *Policy Plan* volume serves as the administrative tool to manage, monitor and implement the General Plan. This *Background and Current Conditions* technical report contains all pertinent analysis supporting the *Policy Plan*. This Background and Current Conditions volume takes a comprehensive look at the physical, regulatory, demographic, socioeconomic and fiscal issues impacting development within the City.



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Previous General Plan Efforts

The first City of Nogales General Plan was adopted in 1992. In 2002, an update of the General Plan was undertaken and subsequently named "The City of Nogales General Plan Update 2020". This general plan update was not approved by the voters during the 2003 General Election. The City of Nogales General Plan also referred to as Ambos Nogales adopted in 2011 was approved by the voters and constitutes the last update to the City's General Plan.

General Plan Intent

Prepared in conformance with all applicable requirements provided in the Arizona Revised Statutes (ARS) Title 9, Article 6, Section 9-461.05, the Nogales General Plan seeks to provide a model for border city planning through meeting the City's challenges and opportunities while supporting the creation of a shared Ambos Nogales vision that meets the needs of both sides of the border and further strengthens its binational economy. This General Plan is created to provide specific guidance for Nogales, Arizona that not only supports Ambos Nogales but also continues to further the rich culture, tradition, identity and economic base of Ambos Nogales as a unique place to live, work, learn, visit and be among friends.

Accomplishments Since 2011

A variety of efforts aiming at revitalizing Nogales downtown, including adaptive reuse and historic preservation have taken place since the adoption of the previous General Plan. The Bowman Senior Residences, a Senior 62 and older community, opened in March of 2016. The project preserved the exterior façades of the historic Bowman Hotel located in downtown Nogales close to shopping centers and restaurants. Bowman Senior Residences is a 48-unit community consisting of one bedroom one bath apartments for low-income seniors.





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Planning Process

The General Plan planning process involves five basic steps:

- The collection and analysis of pertinent data concerning the physical and socio-economic characteristics of the area, which has been accomplished through the preparation of this *Background and Current Conditions* technical report. Although not an adopted document with legal status, it provides the foundation and basis for the formulation of the General Plan;
- The preparation, coordination and facilitation of an all-inclusive *Community Involvement Program*;
- The formulation of a vision statement for future growth and development;
- The preparation of guiding principles, goals, policy framework and implementation measures that serve as the road map for future development; and
- The implementation of the General Plan is accomplished through the preparation, adoption and execution of the Implementation Plan.



General Plan Update Planning Process



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International & Regional Context

An international border community on the United States and Mexico Border, Nogales, Arizona is located approximately 70 miles from Tucson, Arizona and 180 miles from Phoenix, Arizona. Nogales provides easy access via major interstate highway systems (East-West I-8, I-10, I-40 and North-South I-19) and it is served by thirty-nine major interstate trucking lines. Overnight trucking services are available to Los Angeles, San Diego, Las Vegas, Phoenix, El Paso, and Albuquerque. The southern terminus of Interstate 19 is located in Nogales at the United States-Mexico international border; the highway continues south into Mexico as Mexico Federal Highway 15. Exhibit 1 shows regional context.



La Mariposa U.S. Port of Entry, Nogales, Arizona

International Ports of Entry

The City of Nogales is Arizona's main international gateway into the United States and Mexico. The United States Department of Homeland Security operates a Service Port, the Dennis DeConcini Port of Entry (POE), on Grand Avenue, the Morley Gate pedestrian POE, and La Mariposa POE. La Mariposa POE is the 4th busiest port in the U.S. It is also Arizona's largest commercial port and premier port of entry. A state-of-the-art facility, La Mariposa is LEED Gold certified.

Local Context

The corporate boundary of Nogales encompasses a total of 20.8 square miles. Nogales, Arizona, is bordered on the north and east by unincorporated Santa Cruz County land, on the west by Coronado National Forest, and on the south by Nogales, Sonora, Mexico. Exhibit 2 shows local context.

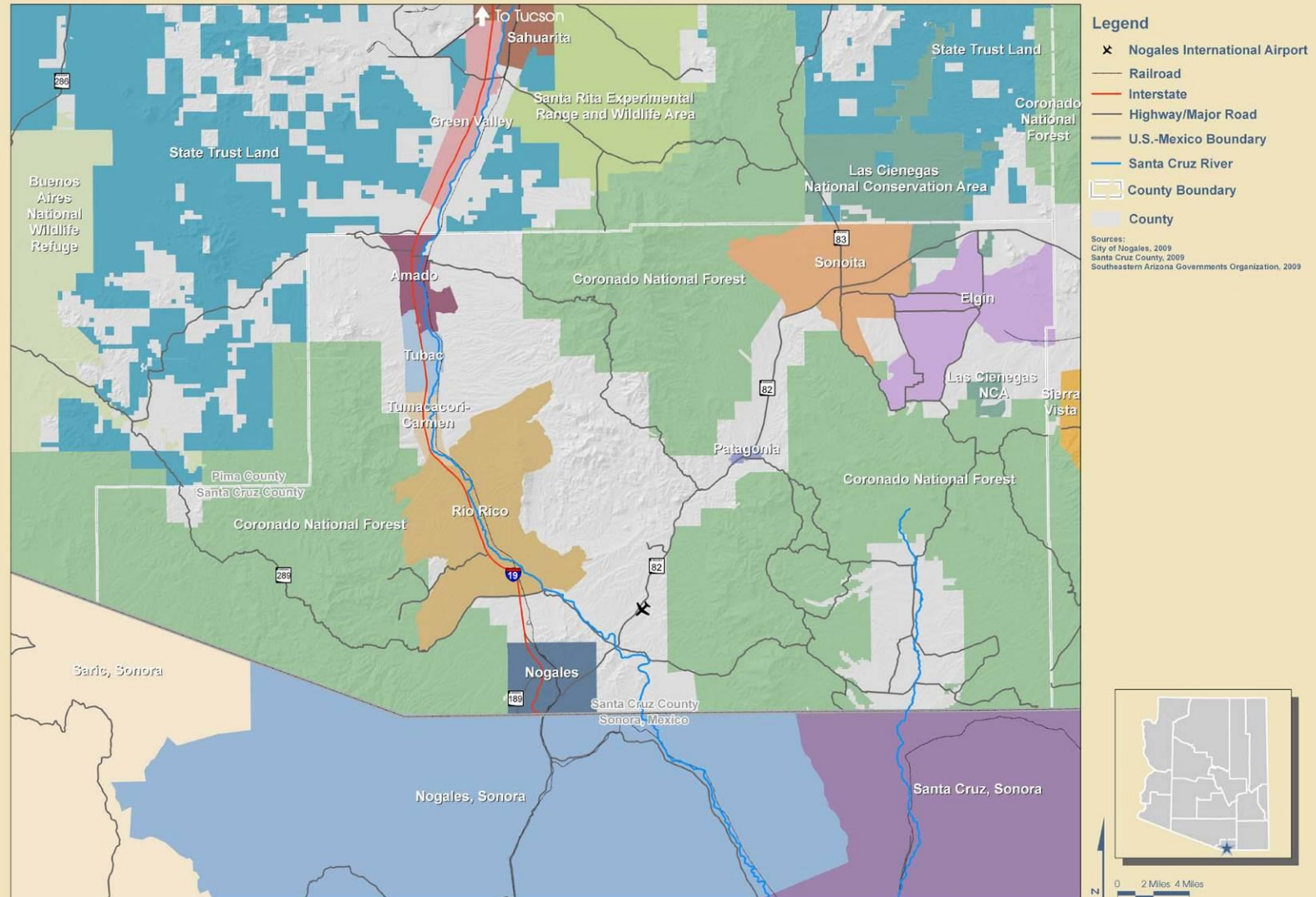
Nogales, Arizona, Designated Growth Area

For the purpose of this General Plan, the Nogales Ultimate Boundary or Designated Growth Area (DGA) extends to the Santa Cruz River on its eastern edge and includes the Nogales International Airport and Kino Springs. On the north the DGA extends to the Rio Rico/Interstate 19 Intersection; on the west to the Coronado Forest boundary and south to the international US/Mexico border. The airport region is currently served by the City of Nogales water utility company. Exhibit 3: shows the Nogales DGA.



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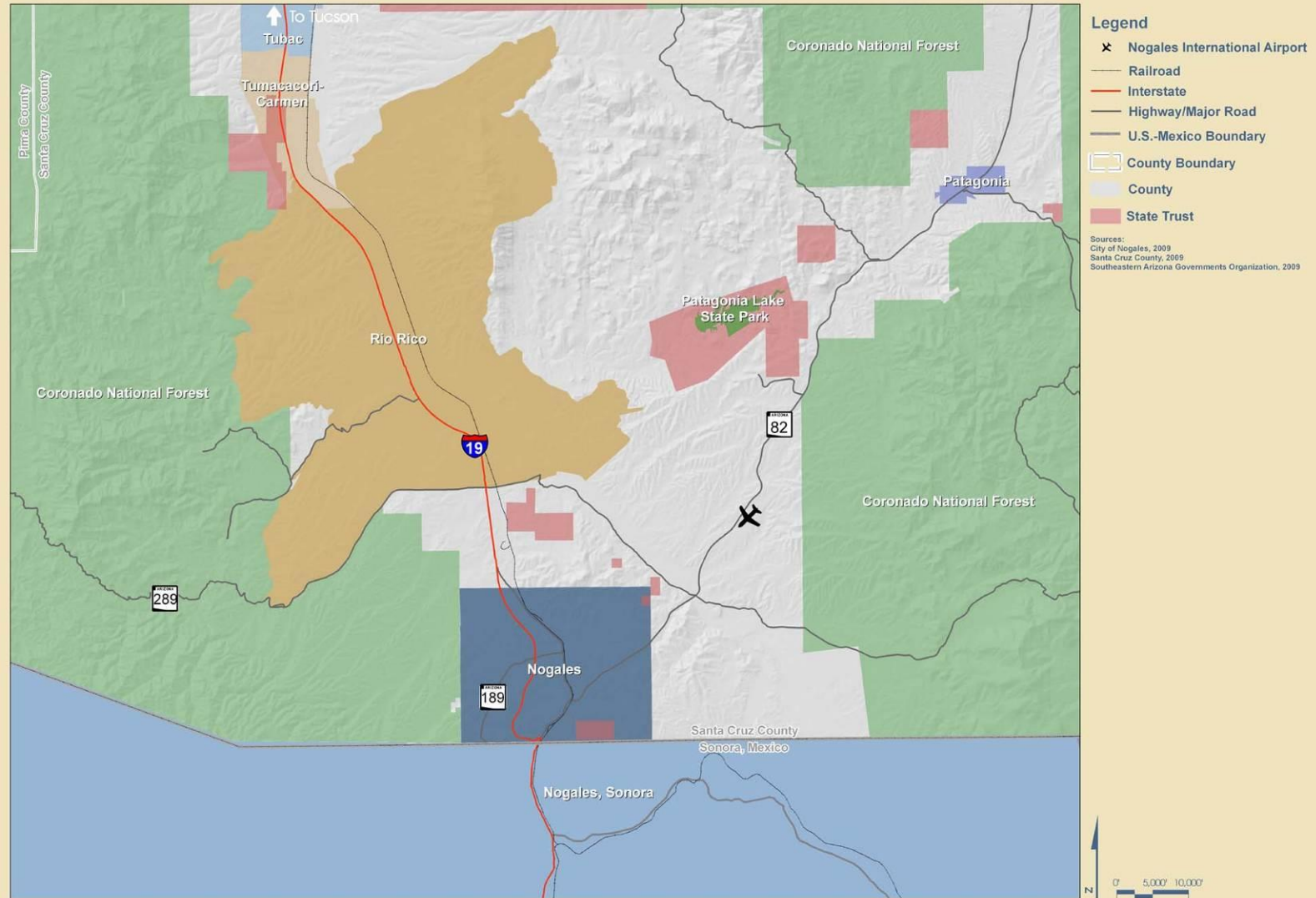
EXHIBIT 1: INTERNATIONAL AND REGIONAL CONTEXT





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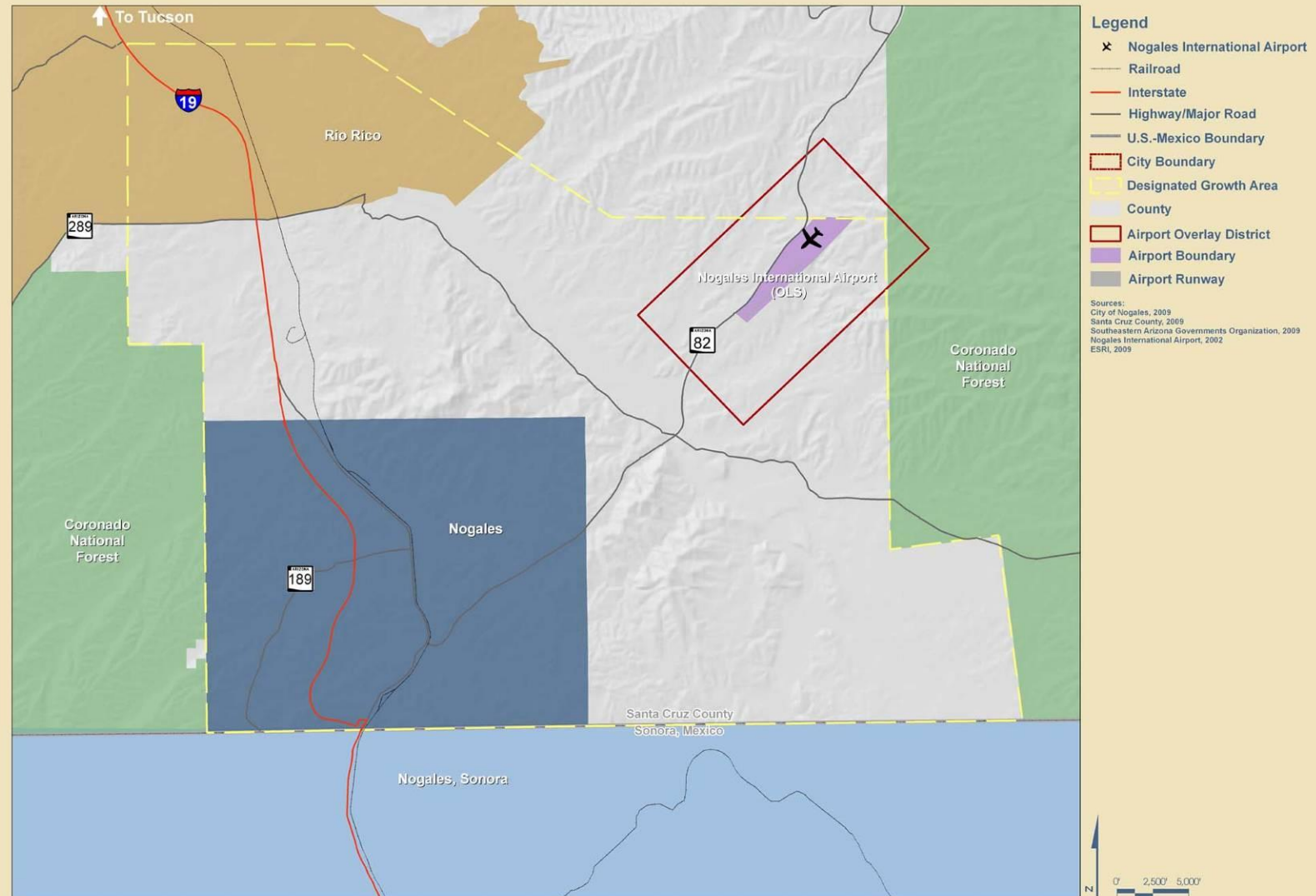
EXHIBIT 2: LOCAL CONTEXT





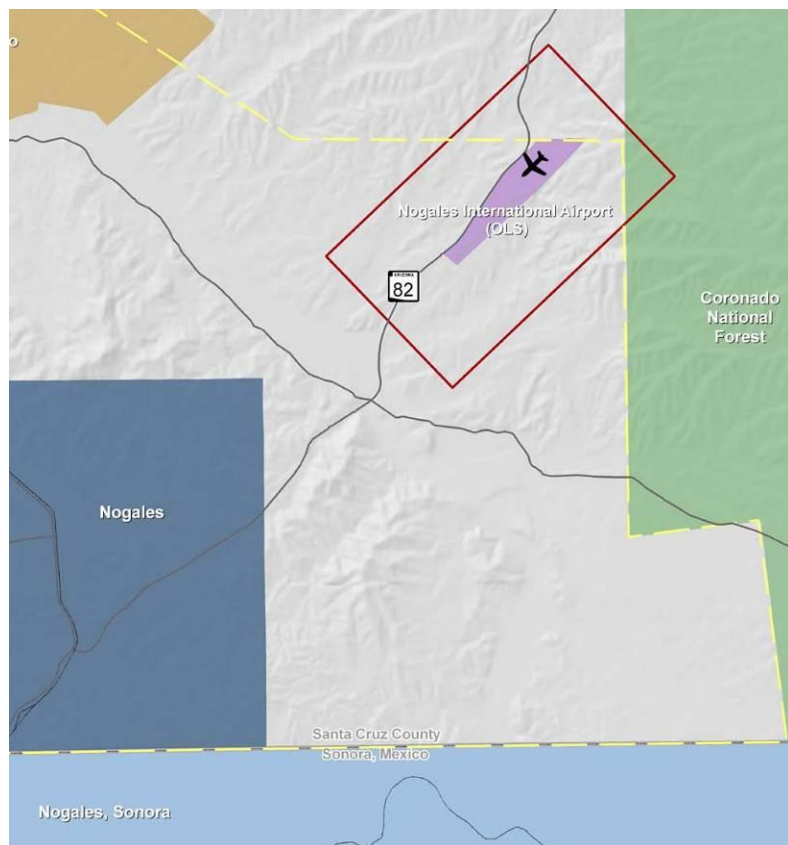
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EXHIBIT 3: NOGALES DESIGNATED GROWTH AREA





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Nogales International Airport

The Nogales International Airport is a general aviation public airport owned by Santa Cruz County and located six miles northeast of Nogales. The 340-acre Airport is an airport of entry in the national airport system, accommodating both domestic and international general aviation, corporate, cargo, and air taxi traffic. Government organizations utilizing the airport include the military, National Guard, and Border Patrol. It is not served by any commercial airlines.

Airport Master Plan updates were completed for the Nogales International Airport in 2002 and in 2015. The 2015 master plan update provides guidelines for the twenty-year master planning future to satisfy aviation demand, minimize environmental impacts, and support airport-compatible land uses, including an aviation-compatible industrial park.

Airport facilities include airside facilities including the runway, taxiways, and navigational and visual aids as well as landside facilities that include the terminal, FBO facilities, hangars, apron tiedowns, and airport support facilities. Aircraft currently operating at the Airport include the larger corporate jet and turbo twin-engine aircraft. Nogales International Airport plays a critical role in the economic development of the region, the County and the City of Nogales.

Union Pacific Railroad

Union Pacific Corporation is one of America's leading transportation companies. Its principal operating company, Union Pacific Railroad, is North America's premier railroad franchise, covering 23 states across the western two-thirds of the United States.

The railroad links every major West Coast and Gulf Coast port and provides service to the east through its four major gateways in Chicago, St. Louis, Memphis and New Orleans. Additionally, Union Pacific operates key north/south corridors and is the only railroad to serve all six major gateways to Mexico. UP also interchanges traffic with the Canadian rail systems.

The railroad has one of the most diversified commodity mixes in the industry, including chemicals, coal, food and food products, forest products, grain and grain products, intermodal, metals and minerals, and automobiles and parts. The railroad is the nation's largest hauler of chemicals, much of which originates along the Gulf Coast near Houston, Texas. Union Pacific is also one of the largest intermodal carriers – that is the transport of truck trailers and containers.



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Throughout its existence, the success of Union Pacific's business has been inextricably linked to the economic and community wellbeing of cities and towns across the nation. Its *Community Ties Giving Program Union Pacific Foundation Local Grants* prioritizes funding for direct services and efforts that build the capacity of organizations focused on the following causes within our local operating communities: safety; work force development; and programs supporting the local economy by building and enhancing community spaces that contribute to the distinct identity of a city or town, creating destinations where families, businesses, and visitors want to be.

Climate

Nogales has a semi-arid steppe climate, which is less hot and more rainy than a typical arid climate classification. In the winter months, Nogales averages in the mid to upper 60s, with both January and February averaging daily highs of 64°F (18°C). Lows typically settle just below the freezing mark (32°F/0°C) on a majority of nights, but it is not uncommon to see temperatures tumble below 25°F (-4°C) on some winter nights.

On the other hand, in the summer months, highs average between 90°F (32°C) and 100°F (38°C), with the month of June being the hottest with an average daytime high of 96°F (36°C). Nighttime lows for the summer months remain in the upper 50s and lower 60s for the duration of the season. June and July typically see eight inches or more of combined rainfall, which brings the average annual precipitation for Nogales to about 19 in (483 mm).

Nogales' all-time highest recorded temperature is 112°F (44°C), which was reached on June 26, 1990. The all-time lowest recorded temperature that thermometers dipped to was -4°F (-20°C), which occurred on December 8, 1978.

Average Temperature and Precipitation Chart

J	F	M	A	M	J	J	A	S	O	N	D
0.9	0.7	0.6	0.4	0.2	0.6	2.9	3	1.3	0.8	0.4	1
64	67	71	78	86	96	94	92	90	82	72	64
27	30	34	38	45	54	64	63	56	44	33	28

Average Maximum and Minimum Temperatures in °F.
Precipitation Totals in Inches.

Source: National Weather System



Nogales Climate Allows Visitors to Enjoy the Local Culture Throughout the Year



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Ambos Nogales

The Juan Bautista de Anza National Historic Trail starts in Nogales. Anza began recruiting settlers and soldiers in the Spring of 1775.

The name Nogales predates the arrival of the Gadsden Purchase Boundary Survey party. In his report Lt. N. Michler speaks of visiting the commissioner in the "pretty little valley of Los Nogales," saying that the camp was near Los Nogales itself. On July 21, 1855 newspapers reported that the American and Mexican Boundary Commissions were encamped permanently in Los Nogales, eight miles from Calabasas on the road to Magdalena, Mexico.

The official name for the camp was Monument. To eliminate any further doubt about this location, the *Weekly Arizonan* (April 21, 1859) may be quoted "Monument or Nogales Rancho." Nogales Ranch was in Nogales Pass through which the railroad would later lay rails beside Nogales Wash. The ranch was a stage station and livestock center.

On the Williamson-Robert map of 1868 it was called Dos Nogales and lies on the border adjoining the route from Tubac south into Mexico. In the late 1870s, plans were completed for the railroad to be built northward from Guaymas to the border and southward in the United States with the two to meet at Nogales Pass. A rush started as people tried to be a part of what was expected to be a border boom town. At first Calabasas was so envisioned. Many went there but a few others went a little further south. Among them was Jacob Isaacson (b. Dec. 9, 1853, Gulding Russia; d. Dec 29, 1928), an itinerant peddler who for the preceding five years had moved around in Arizona. He constructed a small store and warehouse straddling the international boundary line. A small settlement of tents, rude shacks and adobe rose around his store. The budding settlement was called Isaactown. Two years after Isaacson arrived, he helped as the final silver spike for the railroad was driven home.

Meanwhile, an adjacent community known as Line City was developing on the international boundary and the railroad line. Mexicans called the location Villa Riva. Apparently, no one believed that Line City should be a permanent name, for the citizens were asked to select a name. As the railroad station was called Nogales, the citizens petitioned to have the post office name changed from Isaactown to Nogales. With the railroad work completed, a business lull fell on the small border community and Isaacson, a business man to his marrow, moved on to Mexico City. He died in Detroit.

Arizonans refer to the twin cities of Nogales as *Los dos Nogales*, the two Nogales and more recently the twin cities are refer to as Ambos Nogales. From its beginning as a box car road station and a community of one or two stores, tents and a few mud huts, Los dos Nogales grew into large, prosperous attractive cities. Nogales, Arizona, is the county seat for Santa Cruz County.¹

¹ Barnes, Will C.; Granger, Byrd (ed.) *Arizona's Names : X Marks the Place* Falconer Pub. Co.: distributed by Treasure Chest Publications, c1983. P. 437



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History of Nogales

Nogales, Arizona, a crossroads community for a thousand years, has a unique history. The name Nogales comes from the Spanish word "walnut". Walnut trees once grew abundantly in the mountain pass between Nogales, Arizona and Nogales, Mexico. The information compiled in this section summarizes the complexities of such intricate history.²

Thousands of years ago, before European explorers ever dreamed of sailing across the Atlantic, Nogales was part of a migratory path and trade route much later called El Camino Real (The King's Highway). Much later, regiments of armor-clad Conquistadors forayed north along this very valley in quest of precious metals and gems.

In 1775-76, Juan Bautista De Anza led some 240 men, women, and children on an epic journey to establish the first non-Native settlement at San Francisco Bay. Today, the 1,200-mile Juan Bautista de Anza National Historic Trail connects history, culture, and outdoor recreation from Nogales, Arizona, to the San Francisco Bay Area. Today missions built by the Spanish colonials still dot the valley's landscape.

As one travels south along Interstate 19, one notices the valley narrows. At the narrowest point is Nogales. In the 1800s, ranchers in the area were besieged by Apaches raiding herds of well-fed cattle.

The Elias land grant of 1841 for the Rancho Nogales de los Elias predates the Gadsden Purchase also called Treaty of La Mesilla dated 1853. Ambos Nogales grew on the Elias Grant. Significant changes begin with the Gadsden Purchase in 1853. This year marks the beginning of the commercialization of the area.

After 1854, Nogales grew from a ranching industry base to a commercial center with mining (1854-1910), a military post (1910-1932) and general commerce, which blooms from the 1900s to the present. A historic chronology of the city progresses from ranching industry (c.1854) to produce industry (1905), to retail commercial trade (c.1920) and to the maquiladora era (1969). Although mining and the cattle industry substantially declined in modern times, all other commercial enterprises continue to thrive today.

The City of Nogales was incorporated in 1893. During the same year, the first mayor, James Mix, was appointed. During the 1900s the federal government created a 60-foot strip along the U.S. side of the border to clear buildings and structures that were built up to it. This action defined the international border.

² Information provided by Nogales-Santa Cruz Chamber of Commerce, 2009 the City of Nogales and Pimeria Alta Historical Society, 2009.



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Henry Flipper, the first black graduate of West Point, served as the surveyor who engineered the plan and cleared the strip. The Bradford Map of 1930 defines the 1.75 square miles of Nogales as the "original" Nogales.

Historic Downtown reflects the changes in the industries of mining, cattle, military, produce and retail trade, with the latter having the greatest architectural expansion. Two historic districts were defined in 1985, the Court Street (Marsh Heights) and Crawford Street Districts.



Today Where Pete's ranch once was, is now Pete Kitchens Outpost, a restaurant. This is one of the original 1853 structures of the old Kitchen homestead. Life on the border would not be complete without the influence of Pancho Villa, whose army occupied Nogales, Mexico in 1914 during the Mexican Revolution. The U.S. military's garrison in Nogales swelled to over 10,000 mostly black soldiers of the highly decorated 25th Regiment mostly detached from Washington, D.C. The military buildup and related business growth attracted many businesses to Nogales, some of which remain today.

A new sense of law and order was established by the sheriff, Tom Turner, along with a brand-new courthouse. The courthouse built in 1904 still stands in its Neo-Classic splendor on a hill off Main Street. We call it the 1904 Courthouse. It cost \$35,000 to build the courthouse and was made of stone quarried in Nogales.



Neo-Classic Courthouse Circa 1904

The Old City Hall was built in 1914, a year before Arizona became a state. It was used as the Office of the Mayor, the Sheriff's office with two holding cells, and the Fire Department. Now, it houses the Pimeria Alta Historical Society.



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Architectural Styles

In terms of architectural styles, there's the predominant Sonoran Style. The city also includes fine examples of Queen Anne Cottage, Second Empire, Spanish Colonial, Pueblo Revival, Mediterranean Style, and Bungalow Style within the downtown area. Along historic Morley Avenue, stores like Capin & Company and Brackers Department, established in the early 1900s, are run by descendants of pioneer merchants, and are still thriving today.

Important Dates in Nogales History

Nogales history traces back to 1539. A brief chronology of the city's most relevant dates follows.³

1539—Fray Marcos de Niza, a Franciscan priest in search for Cibola, the Seven Cities of Gold, felt he was close when he reached the Ambos Nogales territory. His report on the district prompted a Spanish expedition led by Francisco Vazquez de Coronado in 1540 to lay claim to the cities. Although Coronado failed to find Cibola in Arizona, he explored the Santa Cruz Valley.

1841—México made a land grant, Los Nogales De Elias, to Don José Elias and his parents. Don José owned Rancho Casita, which is located in México. The land grant was named Nogales, the Spanish word for walnut, for the groves of native walnut trees that thrived in the area.

1853—Nogales became part of the Gadsden Purchase in a move that was to keep lawyers busy until 1893. During the Joint Boundary Commission survey of the new international line, Commissioner Emory and his crew

discovered that the spring-fed walnut grove bisected the new line and Ambos Nogales was formed.

1861—Soldiers leave to fight in the Civil War and the Apaches begin their raids into the Arizona territory in what has become known as Cochise's War.

1862—Pete Kitchen, a former wagon master under General Zaccarias Taylor, and his wife Doña Rosa establish a ranch and fortified stronghold five miles north of present-day Nogales.

1880—Jacob Isaacson, a Russian immigrant, built a trading post, Isaacson, later to become Nogales.

1881—Juan José Vásquez opens a roadhouse on the other side of the line and Ambos Nogales is open for business.

1882—The Atchison, Topeka, and Santa Fe Railroad from Kansas City, Missouri met the Sonora Railway, Ltd from Guaymas, México in Nogales. William Raymond Morley supervised the last spike joining the lines. No good having a railroad without a post office so Isaacson Post Office was also commissioned. Theodore Gebler, a native of Berlin and successful San Francisco merchant, visits Nogales and decides to stay. For 28-years Gebler operated a hardware store in Nogales as well as being the director of the First National Bank. When he died without an heir in 1926, his will stipulated that the building on Grand Avenue be constructed and the income used to provide for Nogales's needy in perpetuity.

1883—Wells Fargo Stagecoach Company started transportation and shipping services originating in Nogales. The name of the Post Office was changed from Isaacson to Nogales and the owner of the roadhouse, Juan José Vásquez, was appointed the Comisario de Nogales, Sonora. In Sonora thousands were killed in a Yellow Fever outbreak.

³ *Important Dates in Nogales History* provided by the City of Nogales, Nogales, Arizona 2009



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1884—Próspero Sandoval opened the first bank, money exchange and custom brokerage house in Nogales. The bank is of interest because it was a U.S. bank owned by Mexican citizens, issuing U.S. currency. It is believed that bank was located on the corner of Morley Avenue and International Drive.

1885—Geronimo's campaign kills the Pecks, Shanahan and a stage driver in Lochiel marking the end of the Apache uprising. Dr. Ross comes to town because of the Yellow Fever outbreak. John Guinn founds The Frontier as the first weekly newspaper and Nogales builds its first public school on Elm Street. Today the Elm Street School site is the Sacred Heart Church parking lot.

1888—Edward Titcomb, a New Englander, and his friend, Colonel Bill Roy establish a mining machinery sales agency, which becomes widely known in México and the United States. Titcomb & Roy expand into foundries, lumber mills, and shipyards making a fortune—losing it in the great depression.

1892—The Escalada Brothers open a general store.

1893—Nogales was incorporated as part of Pima County in the Arizona territory. The incorporation was remarkable because Nogales had no property. The Camou family claimed the district, part of the 1841 Los Nogales De Elias land grant. Henry O. Flipper makes a vital contribution to Arizona history in the Court of Private Land Claims in 1893 securing the land for the newly incorporated Nogales. The Montezuma Hotel is the site of the great celebration when, on December 14, 1893, Flipper sent the Nogales Herald a triumphant telegram from Tucson: "The court decides in our favor."

1895—Twenty-eight of the most prominent citizens of Nogales meet at the Marsh Opera House on Nelson avenue to organize the Volunteer Fire Department. With the \$164 they subscribe, equipment is purchased from Tombstone, which was upgrading its own fire department. It includes a hook and ladder cart, a hose cart and the Able and Willing pumper. The

pumper serves Nogales until 1917 and is on display at the Pimeria Alta Museum.

1896—Yaqui's take México's Customs House and Colonel Emilio Kosterlitzky, chief of México's federal forces, restores order.

1897—Nogales replaces Tombstone as Catholic Parish seat.

1898—Nogales receives a government patent to the town site. The Public Water Works begins work to deliver water to the township.

1899—Santa Cruz County splits from Pima County because the citizenry believes that Tucson is too far away to govern effectively.

1904—New County Court House opens and there are 122 telephones in Nogales.

1906—Sisters of Mercy Hospital opens the St. Joseph Hospital's doors. It was located where the downtown Burger King now sits.

1910—México's Revolution starts. The Southern Pacific opens the direct Tucson-to-Nogales rail line. U.S. Infantry establishes a camp near Morely Avenue and Hudgin Street. A train carload of oranges marks the beginning of the produce industry in Nogales.

1913—Street lamps debut on Morley Avenue. Colonel Emilio Kosterlitzky, on the 'wrong' side of México's revolution chooses to surrender to Troop G, 5th Cavalry at Nogales.

1914—General 'Pancho' Villa and General Álvaro Obregón negotiate with México's Sonoran Governor José María Maytorena. Maytorena agreed to continuing military rule in Sonora. Francisco 'Pancho' Villa and Álvaro Obregón controlled two of the three most powerful rebel armies in northern México. The third rebel faction was controlled by Venustiano Carranza. Pancho' Villa's 85-piece band plays in Nogales Park.



City of Nogales General Plan

Eventually, Álvaro Obregón and Francisco Villa began to fight against each other, leaving the legendary Pancho Villa defeated. The Nogales Herald becomes Nogales's first daily newspaper.

1915—The Town Hall, now the Pimeria Alta Museum, is dedicated. A 30-minute pitched battle erupts after Mexican soldiers fire at troops of the 12th Infantry on the American side of the border. Private Stephen D. Little was killed in action on Crawford Street Hill and the camp near Morely Avenue and Hudgin Street is re-named to Camp Stephen D. Little in honor of the 21 year old South Carolinian. 'Pancho' Villa visits Nogales as a welcome guest for the first time.

1917—México's Sonoran Governor Maytorena erects the first fence between Nogales, Arizona and Nogales, Sonora. The 11-strand wire fence was erected to prevent trouble.

1918—The Battle of Nogales begins as a Customs matter. Casualties were suffered on both sides of the border during the battle.

1922—Nogales becomes a City. A new gate opened on Grand Avenue, which is still in use today.

1924—The Public Library opens.

1925—Nogales International weekly newspaper is established.

1927—El Costeño provides the first passenger rail service from Tucson through Nogales to México City.

1928—Nogales dedicates the International Airport.

1932—Nogales accepts Chinese refugees expelled from México. Camp Steven D. Little, once 3,000 soldiers strong, is closed.

1948—Pimeria Alta Historical Society is organized.

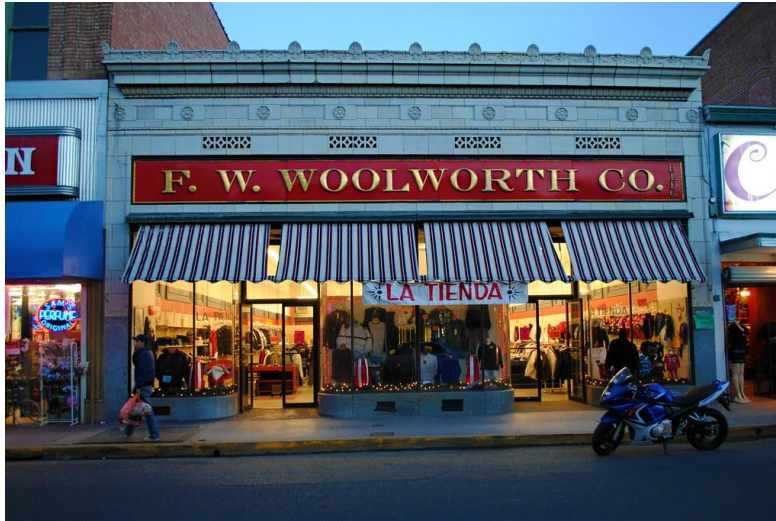
1953—Refrigerated truck service begins, forever changing the produce industry.

1974—U.S. President Gerald Ford and México's President Luis Echevarria meet in Ambos Nogales.





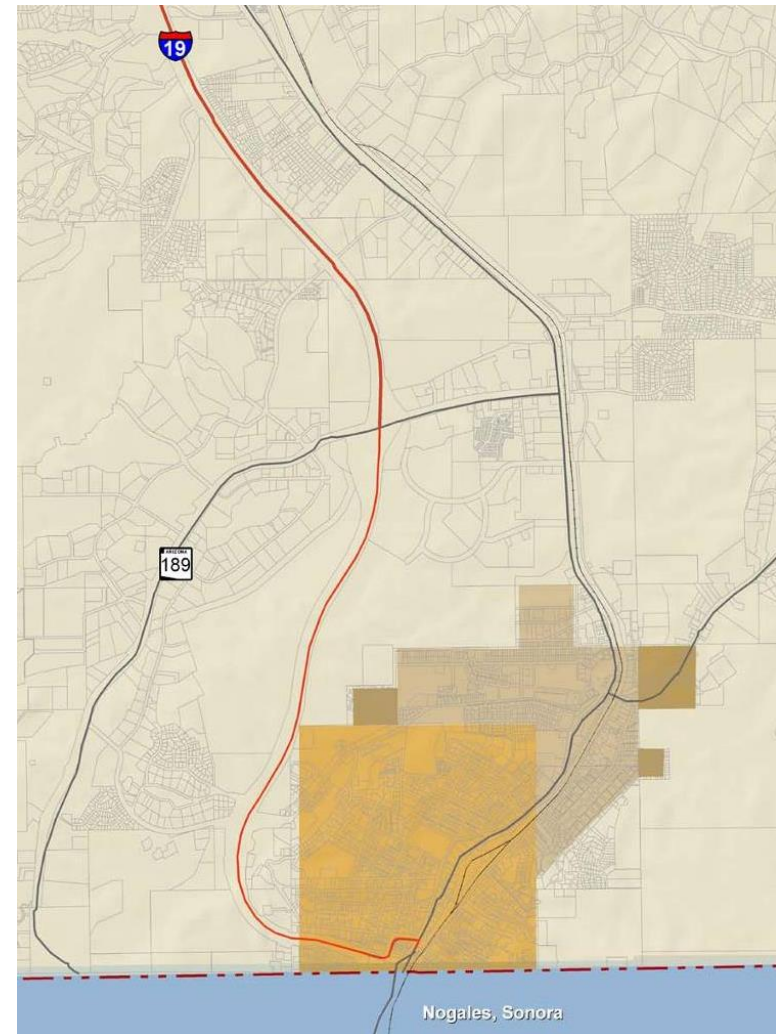
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Nogales Historic Downtown

Nogales Annexation History

In 1896, Henry Flipper petitioned the United States government for clear title to one square miles for the City of Nogales. In 1898, that clear title was received and thus the Original Townsite of 1 square mile was established. The City Charter was adopted under Mayor Duane Bird, extending the boundary of the City to 2 square miles. In the 1960s, three annexations added a combined 60 acres to the City. In 1979, the City was annexed to its current boundary of 20 square miles (see Exhibit 4: Annexation History).

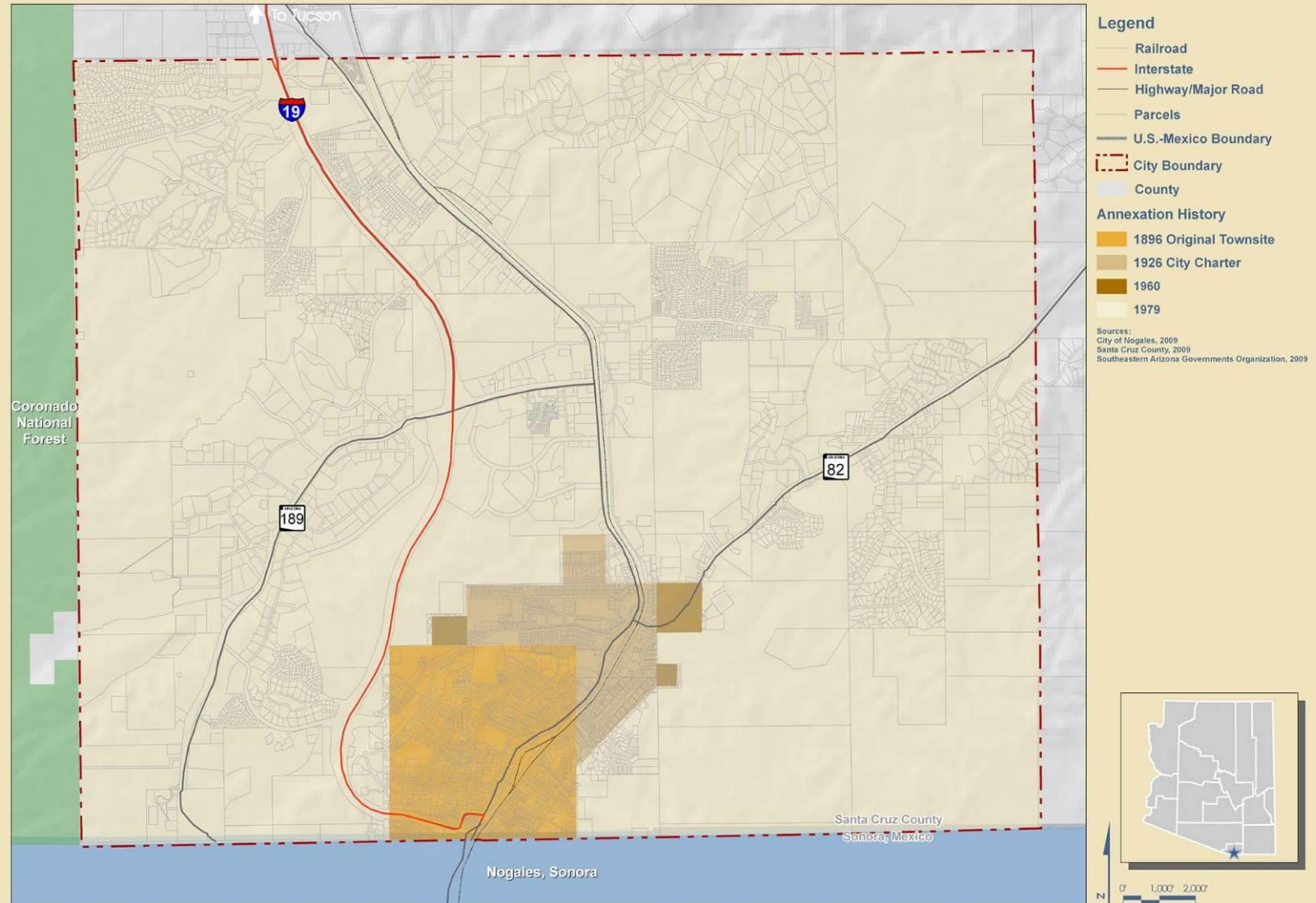


Nogales, Arizona, 1960s Annexation (dark ochre)



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EXHIBIT 4: ANNEXATION HISTORY





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Economic Development



Nogales, Arizona is a multi-cultural community with strong economic, social and cultural ties to the Mexican states of Sonora, Baja California, Sinaloa and Chihuahua, allowing companies to take full advantage of the Canada Mexico Arizona (CANAMEX) Trade Corridor, proposed Interstate 11 Corridor, Nogales to Wickenburg, and the International Nogales port-of-entry. Their strategic location, allows Nogales, Arizona, and its sister city Nogales, Sonora, to take full advantage of binational economic development opportunities and initiatives.

Ambos Nogales: A Binational Economy

The term *Ambos Nogales* has been used historically to indicate the need to address historical, social, cultural, environmental and economic factors utilizing a binational integrated and inclusive approach. Such approach is conducive to increasing the region's economic development potential and better suits the binational economy of border cities. Nogales has grown from a two-nation border town dependant on ranching into a diverse

international economy based on agribusiness and produce distribution and international commerce.

Ambos Nogales are the home of one of the largest maquiladora clusters. This enables multinational manufacturing plants on both sides of the border to take competitive advantage of favorable wage and operating costs and excellent transportation and distribution networks.

The following initiatives have resulted in the activation, facilitation, and acceleration of economic activity throughout Arizona with specific impact on Ambos Nogales business growth:

- Fixing America's Surface Transportation and I-11 Proposed Corridor
- Arizona Trade Offices in Sonora and Mexico City
- CANAMEX Corridor
- Arizona-Sinaloa Commission
- The Governor's Strategic Partnership for Economic Development Cluster Industries

The University of Arizona plays an integral role in these projects, taking advantage of its Nogales Campus location to access local, regional, and global markets.

Fixing America's Surface Transportation

In December 2015, the U.S. Congress approved the Fixing America's Surface Transportation (FAST) Act, which is legislation to improve the nation's surface transportation infrastructure during a five-year period. The Fixing America's Surface Transportation Act, or FAST Act, formally designated I-11 as a proposed transportation route in Arizona. It stated that the I-11 corridor will generally follow State Route 189 and Interstate 19 from Nogales to Tucson, Interstate 10 from Tucson to Phoenix, and US 93 from Wickenburg to the Nevada state line.



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ADOT funded and conducted the first step in a tiered environmental study to identify a potential corridor for I-11 between Nogales and Wickenburg. The Tier 1 EIS environmental review process will consider both Build Corridor Alternatives and the No Build (do nothing) Alternative.

The I-11 Draft Tier 1 Environmental Impact Statement and Preliminary Section 4(f) Evaluation (Draft Tier 1 EIS) was completed and made available for public review and comment from April 5, 2019 through July 8, 2019. The study team is considering all comments received on the Draft Tier 1 EIS, conducting additional analysis, and coordinating with stakeholders as needed to prepare a Final Tier 1 EIS, outlining a Preferred Corridor Alternative for I-11, along with the No Build Alternative. All comments and questions received during the Draft Tier 1 EIS comment period will be addressed in the Final Tier 1 EIS, which is expected to be completed and available for review in 2021.

It is anticipated that if build, the potential corridor for I-11 between Nogales and Wickenburg could play a significant role in Nogales economic development strategy.

North American Free Trade (NAFTA)

In the past, The North American Free Trade (NAFTA) positively impacted economic growth throughout Arizona since its implementation. Past accomplishments were also the result of the efforts of the Arizona-Mexico Commission, the Arizona Office of the Governor, the Arizona Commerce Authority, other state agencies, the University of Arizona, and numerous other partners in the public and private sectors who have worked diligently to increase trade in the Arizona-Sonora region. The NAFTA agreement was replaced with the United States-Mexico-Canada Agreement (USMCA). Because the USMCA has not yielded data regarding its implementation yet, this report relies on data from NAFTA to evaluate the economic potential of Nogales.

United States-Mexico-Canada Agreement (USMCA)

The United States reached an agreement with Mexico and Canada in the renegotiation of the North American Free Trade Agreement (NAFTA). It is anticipated that the new USMCA will be a mutually beneficial win for North American workers, farmers, ranchers, and businesses. It is estimated that USMCA's implementation will create a more balanced, reciprocal trade and support high-paying jobs, and stimulate the U.S. economy.

While agriculture has generally performed well under NAFTA, important improvements in the USMCA agreement will enable food and agriculture to trade more fairly, and to expand exports of American agricultural products. Key differences in the USMCA from its NAFTA predecessor include:

- Expanded Market Access for American Dairy, Poultry & Egg Products
- Canada's Milk Classes 6 & 7 to be Eliminated
- Mechanism for Cooperation on Ag Biotechnology, Including New Technologies such as Gene Editing
- Significant Commitments to Avoid Trade-Distorting Policies
- Fair Treatment in Quality Grading for American Wheat
- Non-Discrimination and Transparency Commitments Regarding the Sale and Distribution of Alcohol Beverages.



City of Nogales General Plan



Benefits of NAFTA to U.S. Agriculture

It is too soon to analyze the impact of the USMCA, the successor of NAFTA. Therefore, this section relies on data from the previous agreement to illustrate the economic potential of the Ambos Nogales binational economy. Historically, NAFTA kept Mexican markets open to U.S. farm and food products in 1995 during the worst economic crisis in Mexico's modern history. In the wake of the peso devaluation and its aftermath, U.S. agricultural exports dropped by 23 percent that year, but have since surged back setting new annual records. NAFTA cushioned the downturn and helped speed the recovery because of preferential access for U.S. products. In fact, rather than raising import barriers in response to its economic problems, Mexico adhered to NAFTA commitments and continued to reduce tariffs.

The North American Free Trade Agreement created the world's largest free trade area of 454 million people. It links the economies of the United States, Canada, and Mexico. In 2018, the U.S. GDP was \$20.5 trillion, Canada's was \$1.8 trillion, and Mexico's GDP was \$1.2 trillion. NAFTA's trade area

has a higher GDP than the \$18.8 trillion produced by the 28 countries in the European Union.

Between 1993 and 2018, trade between the three members quadrupled from \$290 billion to \$1.23 trillion. That boosted economic growth, profits, and jobs for all three countries. It also lowered prices for consumers.

During the same period, the United States increased its exports of goods to the other two from \$142 billion to \$564 billion. That's 34% of its total exports, making Canada and Mexico its top two export markets. It shipped \$299 billion to Canada and \$265 billion to Mexico.

U.S. imports from its NAFTA partners were \$665 billion. That's 26% of total U.S. imports. It's also more than triple the \$151 billion imported in 1993. Mexico shipped \$346 billion to the United States and Canada shipped \$319 billion.

NAFTA boosted trade by eliminating all tariffs between the three countries. It also created agreements on international rights for business investors that reduced the cost of commerce. It spurred investment and growth, especially for small businesses.

As USMCA's data becomes available, it will be beneficial for Ambos Nogales to examine trends and take competitive advantage of USMCA.

Travel and Tourism

Travel and tourism continue to be among the most important export industries driving Arizona's Economy.⁴ Travel and tourism is one of the most important "export-oriented" industries in Arizona. Spending by visitors generates sales in lodging, food services, recreation, transportation and retail businesses - the "travel industry." These sales support jobs for Arizona residents and contribute tax revenue to local and state

⁴ Arizona Travel Impact 2000-2018, Arizona Office of Tourism, June 2019 .



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governments. Travel is especially important in the non-metropolitan areas of the state, where manufacturing and traded services are less prevalent.

Arizona Travel Impacts 2000-2018, prepared by Dean Runyan Associates for the Arizona Office of Tourism in 2019, reports that the Arizona travel industry had its fourth consecutive year of exceptionally strong growth, following mostly modest increases in spending and related impacts since the recession of 2007 to 2009. This is the ninth consecutive year of industry growth.

- **Spending.** Total direct travel spending in Arizona was \$24.4 billion in 2018. Non-transportation visitor spending increased by 7.1 percent, following a 6.3 percent increase from 2016 to 2017. Real travel spending increased by 5.3 percent in 2018.
- **Travel Activity.** Visitor air travel on domestic flights to Arizona destinations increased by 4.4 percent in 2018, following a 5.8 percent increase the preceding year. Room demand increased by 4.1 percent for 2018, following a 2.8 percent increase the preceding year.
- **Employment.** Direct travel-generated employment was 192,300 in 2018. This represents an addition of 4,100 jobs, an increase of 2.3 percent.
- **Secondary Impacts.** The re-spending of travel-related revenues by businesses and employees creates secondary impacts. In 2018, the secondary impacts were 165,300 jobs with \$7.8 billion in earnings.
- **GDP.** The Gross Domestic Product of the travel industry was \$10.5 billion in 2018. The travel industry and the microelectronics industry have been the top two export-oriented industries in the state in recent years.



Impact of Mexican Visitors

Mexican visitors are the largest component of day-trip visits to Arizona. In 2001, over 23 million of Mexican visitors came to Arizona in 10.49 million parties. Almost exclusively (over 99 percent), Mexican visitors come from the neighboring state of Sonora.⁵

The University of Arizona assessed the spending by Mexican visitors to Arizona in 1997, 1999 and 2001 to systematically measure economic impacts of Mexican visitors' spending in the economy of Arizona. The results of each study have confirmed that Mexican visitors are an important component of Arizona's tourism industry.

⁵ Alberta H. Charney, Ph.D. and Vera K. Pavlakovich - Kochi, Ph.D. *The Economic Impact of Mexican Visitors to Arizona 2001*, Economic & Business Research Center, University of Arizona, July 2002



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The 2001 and 2007-08⁶ are based on a year-long survey of Mexican visitors returning from Arizona at six border ports of entry (San Luis, Lukeville, Sasabe, Nogales, Naco and Douglas) and two international airports in Phoenix and Tucson. With minor modifications, the 2001 and 2007-08 studies replicate the research methodology applied in the study of 1991 impacts.

According to the Arizona Office of Tourism 2019 report, nearly 3.6 million people from Mexico choose Arizona as a travel destination annually, representing the largest segment of international tourism to Arizona. Tourism from Mexico accounts for the majority of all expenditures in Arizona by international visitors to the state. Tourists from Mexico have an annual economic impact of \$2.5 billion and support approximately 30,000 jobs throughout Arizona.

Trade and Commerce

Arizona knows firsthand the positive impact international collaboration can have on the state. The Arizona-Mexico Commission has worked for nearly six decades to strengthen the relationship with Mexico, Arizona's largest trading partner. The Arizona-Mexico Commission facilitates innovative and impactful ways to position Arizona at the forefront of an increasingly interconnected global economy.

According to Arizona-Mexico Commission and U.S. Census Bureau, Mexico is Arizona's largest trading partner. Arizona's two-way trade with Mexico was \$16.6 billion in 2018: nearly \$7.6 billion in exports and \$9 billion in imports.

Arizona's infrastructure supports international trade and tourism with six international border ports of entry, including one of the nation's largest commercial ports, the Mariposa Port of Entry in Nogales, Arizona.

Visitors from Mexico contribute between 60-70% of sales tax revenue in our border communities. Arizona's expanded ports of entry are driving investment in infrastructure. Nearly \$60 million of private investment has resulted from improvements to border infrastructure in Nogales, Arizona, for warehouses and distribution centers to support international commerce.

Together, Arizona and Mexico are leaders in the automotive industry, importing \$968 million and \$761 million in auto parts in 2016 – net trade of nearly \$1.7 billion annually. The automotive industry in Arizona and Sonora produces 1,488 vehicles daily, supporting more than 50,600 employees.

Long waiting lines at U.S. Ports of Entries can lower amount of Mexican visitors to Arizona. Lower visits translate to lower sales taxes, and lower sales taxes turn into lower State share revenues.



⁶ Alberta H. Charney, Ph.D. and Vera K. Pavlakovich - Kochi, Ph.D., Mexican Visitors to Arizona: Visitor Characteristics and Economic Impacts, 2007-2008, Economic & Business Research Center, University of Arizona, 2009.



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Border Crossing Statistics

As reported by the Arizona-Mexico Commission, Arizona's ports of entry are a gateway for Arizona commerce and tourism. In 2018 Arizona saw crossing volumes of:

- 25,118,397 people
- 396,489 trucks
- 12,793 buses
- 9,334,650 cars
- 737 trains
- 7,110,476 pedestrians

Of the Arizona's port of entry totals, La Mariposa Port of Entry in Nogales received:

- 3,422,816 Pedestrians
- 337,179 Trucks
- 9,569 Buses
- 3,603,601 Personal Vehicles

Border crossing statistics for all the ports of entry in Nogales are provided in the Transportation chapter of the Background Analysis and Inventory section of this document.

Nogales as an Economic Stronghold

As reported by the Arizona-Mexico Commission, nearly \$60 million of private investment has resulted from improvements to border infrastructure in Nogales, Arizona, for warehouses and distribution centers to support international commerce. The City of Nogales continues to be the preferred port of entry for Mexicans entering Arizona. Recapturing a larger portion of passengers and pedestrian annually crossing the border requires a multiprong economic development strategy that could benefit from:

- Revitalize Downtown and preserve the historic core of the *Original Nogales*
- Establish downtown historic district as a focal point for heritage tourism;
- Brand Nogales as tourism destination for both heritage tourism and ecotourism;
- Attract and retain employment and industry sector; and
- Support new growth by provide quality housing with the amenities and quality of life features needed to house Border Patrol, US Customs, and US Port of Entry employees.

Revitalization of the Nogales Downtown Historic District will significantly assist the City in capturing a larger percent of visitors going to Tucson, Casa Grand and Phoenix for shopping and entertainment.

The large amount of passenger and pedestrian border crossings indicate a need to establish the Nogales Downtown Historic District as a strong mixed-use residential, retail, services and entertainment node. Such designation may strengthen the economic base and secure to the long-term viability of the City.





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Foreign Trade Zone

Nogales-Santa Cruz County Economic Development Foundation (“EDF”) is the grantee for FTZ 60. The Greater Santa Cruz County hosting FTZ 60 continues to blossom as a crossroads for trade. FTZ 60 is geographically situated to serve local, regional and global markets. The area is within 500 miles of these major markets and ports. Long Beach/LA; Albuquerque; San Diego; Las Vegas; Guaymas, MX; El Paso; Hermosillo, MX; Yuma; Phoenix. Santa Cruz County, which encompasses FTZ 60, is positioned at the United States southern entry of the CANAMEX trade corridor connecting Western Canada with Mexico’s Pacific Coast and Mexico City. FTZ 60 provides the best location for businesses need to collaborate with Mexico’s West Coast supply chain. Average manufacturing costs in Mexico are now almost 20 percent lower than in China. To learn more about Santa Cruz County’s Foreign Trade Zone 60, visit the Nogales Economic Development Foundation website.

Businesses that locate in Nogales and Santa Cruz County can take advantage of the unique shift in trade that is taking place today between Mexico and the United States. Mexico is again becoming competitive with other global manufacturing regions based on wage levels, cost of labor, better control of IP and proximity.

The benefits offered by participation in the Foreign Trade Zone program through FTZ 60 become more and more relevant and useful as the thriving Ambos Nogales manufacturing belt on the border between Mexico and the United States continues to grow. FTZ 60’s “alternative footprint” allows for the location of foreign trade zone sites across the entire County, for an initial capacity of up to 2,000 acres of activated FTZ. Should a prospective operator so desire, applications can be made to the FTZ board to increase that capacity. FTZ sites offer benefits in the payment of duties and manipulation, labeling, sorting and combination of inventory that can significantly decrease expenses for certain operations.



Machiladora Industry Belt Along the U.S./Mexico Border.

Nogales Principal Economic Activities

Boasting 200 years of entrepreneurship, mercantilism and international commerce through three ports of entry, Nogales’ economy thrives on international trade, manufacturing, tourism and related services. The Ambos Nogales region is home to one of the largest cooperative manufacturing (maquiladora) clusters in North America, with more than 110 companies located in the region. It is also home to America’s largest port of entry for Mexican produce—more than five billion pounds of fruits and vegetables enter through Nogales’ Mariposa Port each year. Mexican shoppers cross the border and generate more than 60% of Nogales’ sales tax revenue.



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Road Transportation and Trucking Companies

Quick Transport Solutions, Inc. known as QuickTSI is a California based one-stop-shop transportation and freight logistics business. The website allows to post load or find trucks, post trucks or find loads, look up carrier profiles, view trucking companies, and find truck driving jobs and includes one of the largest online directories of trucking companies in the U.S. The QuickTSI [Nogales Trucking Companies Directory](#) lists a total of 540 trucking companies offering road transportation, transportation logistics and trucking services in Nogales, Arizona, making Nogales, Arizona, one of the largest logistics inland ports in the nation.

Impact of Maquiladora Industry on Nogales and Santa Cruz County Economy

The study *Maquiladora Related Economy of Nogales and Santa Cruz County* completed by Vera Pavlakovich-Kochi, Ph.D., Senior Regional Scientist and Associate Geography Professor, University of Arizona, April 2014, describes the maquiladora sector in Nogales, Sonora, yielding about 34,000 jobs with more than 100 plants during that year. According to this study, three industry sectors account for more than 50% of all employment: computer and electronic product manufacturing (23.0%), apparel manufacturing (15.0%), and transportation equipment manufacturing including components and parts for aerospace industry (14.1%).

When electrical equipment and components manufacturing (13.7%), and miscellaneous manufacturing (10.2%) are added, these five industry sectors account for 76% of the maquiladora sector as shown on Table 1. Other sectors represented include fabricated metal product manufacturing; machinery manufacturing, repair of equipment; plastics and rubber products manufacturing, chemical manufacturing, and paper products manufacturing. Additional ten sectors are represented with employment of less than 1% of the total.

Table 1
Employment by Maquiladora Manufacturing Industry
Nogales, Sonora

Description	Number of Employees	Percent Share
Computer and Electronic Product	7,843	23.0
Apparel Manufacturing	5,100	15.0
Transportation Equipment	4,802	14.1
Electrical Equipment, Appliance and Components	4,675	13.7
Miscellaneous Manufacturing	3,463	10.2
Fabricated Metal Product	2,269	6.7
Machinery Manufacturing	1,699	5.0
Repair and Maintenance	1,565	4.6
Plastics and Rubber Products	583	1.7
Chemical Manufacturing	565	1.7
Paper Manufacturing	423	1.2
Administrative and Support Services	262	0.8
Support Activities for Agriculture and Forestry	185	0.5
Leather and Allied Products	175	0.5
Data Processing, Hosting and Related Services	175	0.5
Furniture and Related Products	138	0.4
Professional, Scientific, and Technical Mfg.	111	0.3
Other	46	0.1
Total	34,078	100

Source: NAICS designation based on Index Nogales. Asociación de Maquiladoras de Sonora, A.C. Includes are both members and non-members.



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Maquiladora sector related employment in Ambos Nogales

The same *Maquiladora Related Economy of Nogales and Santa Cruz County* study, compares the maquiladora sector in Nogales, Sonora, and matching industry sectors in Nogales, Arizona, (commonly referred to as Ambos Nogales, i.e., two Nogales) and reports that the industrial structure of Nogales, Arizona, is influenced by maquiladora activity south of the border. For example, the computer and electronic product manufacturing, transportation equipment manufacturing, and electrical equipment and components manufacturing sectors are directly related to the maquiladora sector south of the border.

In terms of services, Nogales, Arizona shows comparative advantages in the Ambos Nogales region, especially in the area of professional services. However, the Nogales Arizona/Santa Cruz County's industrial structure is far from a true "twin plant," "co-production," or "cross-border industry cluster" model. Challenges cited by the study include the proximity to large metro areas of both Tucson and Phoenix. In 2014, about 35 percent of Nogales, Sonora maquiladoras were owned and operated by out-of-Arizona parent companies (including those in California); about 11 percent had parent company in Phoenix or Tucson, while only 20 percent of maquiladoras had parent company (or an outpost of parent company) in the Nogales/Santa Cruz County region, which would largely benefit from capturing a larger share.

Using information contained in the Santa Cruz County IMPLAN model, about 15 manufacturing industries and 20 service industries in the Santa Cruz County economy were identified as having direct connection with the maquiladora sector in Sonora. The study identified estimated direct impacts of maquiladora related trade on jobs, wages and output in Santa Cruz County, which included maquiladora-related exports directly generating 1,140 jobs, \$46.4 million in wages and direct output of \$206.8 million in Santa Cruz County at the time the study was conducted.

The same study also identified secondary economic impacts generated as businesses purchase goods and services from other local businesses and thus support additional jobs and generate additional wages and output in the local economy. Additional secondary impacts are generated as employees spend direct and indirect wages locally. Through these ripple effects, maquiladora-related exports generate additional 636 jobs, \$22.1 million in secondary wages, and \$98.1 million in additional output in Santa Cruz County at the time the study was conducted.

Combining direct and secondary impacts, the maquiladora-related exports generate 1,776 jobs with \$68.6 million in wages. The total dollar impact at the time the study was conducted was \$304.9 million. This impact accounts for 9.8% of County's jobs, 8.9% of total wages, and 15.6% of the total output in Santa Cruz County. The maquiladora related economic activities generated an estimated \$8.7 million annually in tax revenues to state and local governments (included in the output figure).

The concentration of about 100 maquiladora plants in Nogales, Sonora with an average of 34,000 employees, impacts the economy of the Nogales/Santa Cruz County region in several ways. The Nogales BPOE facilitates import-export trade between U.S. based companies and assembly/production facilities south of the border including supplies shipped from Arizona companies. In addition, a number of businesses in Nogales and Santa Cruz County export manufacturing products and services to maquiladoras.

The economic impact of the maquiladora related activities is 1,140 direct jobs and 636 secondary jobs with a total wage impact of \$68.6 million. The total monetary impact, which includes wages and \$8.7 million in tax revenues to state and local governments, is \$304.9 million. This represents 9.8% of County's jobs, 8.9% of total wages and 15.6% of total output. For every 100 jobs in maquiladora export-related sector additional 56 jobs are generated in the local economy through ripple effects; every dollar in direct wages earned in export-related activities and spent locally generates an additional \$0.48 in wages, while every dollar in output (sales) generates additional \$0.47 in additional output in local economy.



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The study concluded that in relation to the maquiladora sector in Nogales, Sonora, the economy of the Nogales Arizona/Santa Cruz County region has not realized a full potential of its proximity to 100 or so maquiladora operations. In part this is a function of the mere size of Santa Cruz County population, and partly an effect of the proximity to a much larger and economically stronger Tucson metro area, which serves as the location of parent companies and a supplier of manufacturing components and services. However, for a number of key services, the border location matters, and Nogales and Santa Cruz County should be able to use its strategic location as competitive advantage.

Nogales Major Employers

Major employers in Nogales, Arizona based on most recent employment data compiled by City and include:

- City of Nogales and Santa Cruz County (Local Government)
- US Port of Entry and US Custom Service (Federal)
- Carondelet Holy Cross Hospital (Full-service Hospital)
- Food Packing and Distribution Companies (Retail Foods)
- Nogales Unified School District (Schools)
- Transportation, Distribution and Logistics (Industry)
- Wal-Mart Supercenter (Discount Department Store)
- Home Depot (Retail Construction)
- USPS Postal Service (Delivery Service)

Employment by Industry Sector

Table 2 shows Nogales employment by industry sector based on Arizona Department of Commerce most recent available data. Figures on Table 2 are organized under the North American Industrial Classification System. The North American Industry Classification System (NAICS) is the standard used by Federal statistical agencies in classifying business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. business economy.

NAICS was developed under the auspices of the Office of Management and Budget (OMB), and adopted in 1997 to replace the Standard Industrial Classification System (SIC). It was developed jointly by the U.S. Economic Classification Policy Committee (ECPC), Statistics Canada, and Mexico's *Instituto Nacional de Estadística, Geografía e Informática*, to allow for a high level of comparability in business statistics among the North American countries.

Table 2
Industry Ranked by Employment
2018

Industry Sector	Employees	Share
Retail trade	1,447	20.3%
Education, health care & social assistance	1,304	18.3%
Arts, Entertainment, Recreation, Accommodation and Food Services	705	9.9%
Transportation, Warehousing and Utilities	653	9.1%
Wholesale Trade	596	8.3%
Professional, Scientific, and Administrative Services	509	7.1%
Construction	423	5.9%
Public Administration	401	5.6%
Finance, Insurance, Real Estate, Rental and Leasing	357	5.0%
Manufacturing	329	4.6%
Other Services	305	4.3%
Agriculture, Forestry, Fishing, Hunting and Mining	67	0.9%
Information	49	0.7%

Source: Arizona Commerce Authority, Nogales Community Profile, based on American Community Survey, U.S. Census Bureau, 2018



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Labor Force Data

Table 3 shows Nogales labor force data based on U.S. Census Bureau 2000 and 2010 Counts and 2013-2017 American Community Survey 5-Year Estimates, 2017

Table 3
Nogales Labor Force
2000 and 2010 Counts and 2017 5-Year Estimates

Labor Force	2000	2010	2017
Civilian Labor Force	7,406	8,071	7,869
Unemployment	752	972	816
Unemployment Rate (Percent)	10.2	12.0	10.4

Source: U.S. Census Bureau 2000 and 2010 Counts and 2013-2017 American Community Survey 5-Year Estimates, 2017

Population

Table 4 shows Nogales population data based on U.S. Census Bureau 2000 and 2010 Counts and 2013-2017 American Community Survey 5-Year Estimates, 2017.

Table 4
Nogales, Santa Cruz County and Arizona
2000 and 2010 Counts and 2017 5-Year Estimates

Place	2000	2010	2017
Nogales	20,878	20,837	20,233
Santa Cruz County	38,381	47,420	46,358
Arizona	5,130,632	6,392,017	6,809,946

Source: U.S. Census Bureau 2000 and 2010 Counts and 2013-2017 American Community Survey 5-Year Estimates, 2017

Table 5 includes Nogales labor force and population data based on U.S. Census Bureau 2000 and 2010 Counts and 2013-2017 American Community Survey 5-Year Estimates, 2017

Table 5
Nogales Labor Force and Population
2000 and 2010 Counts and 2017 5-Year Estimates

Year	Population	Employed	Unemployed
2000	20,878	7,406	752
2010	20,837	7,099	972
2017	20,233	7,053	816

Source: U.S. Census Bureau 2000 and 2010 Counts and 2013-2017 American Community Survey 5-Year Estimates, 2017

As shown on **Table 5**, of the total 2000 population of 20,878 people, approximately 7,406 people, or 35 percent, were part of the civilian labor force; approximately 752 people, or 4 percent were unemployed; and approximately, 12,720 people, or 61 percent, did not meet the employment/unemployment criteria.



Ambos Nogales, the communities of Nogales, Arizona and Nogales, Sonora, México, comprise the largest international border community in Arizona, with a combined population of 177,732 inhabitants as of the 2000 U.S. and Mexican censuses (U.S. Census Bureau 2000, Instituto Nacional de Estadística Geografía e Informática 2000).



City of Nogales General Plan

Based on data from *Instituto Nacional de Estadística y Geografía e Informática de Mexico*, the 2010 population of Nogales, Mexico, was 220,292. The U.S. Census Bureau reports a total population of 20,837 for Nogales, Arizona, in the same year. The combined population in 2010 for Ambos Nogales was 241,129 people.

Arizona-Mexico Economic Indicators

Economic and Business Research Center, Eller College of Management, The University of Arizona, *Arizona-Mexico Economic Indicators Data Update 2019* reports:

- **AZ EXPORTS TO MEXICO** \$2.0 billion in 2019 Q3, up 9.7% from 2018 Q3. While still below peak levels reached in 2015-2016, Arizona exports to Mexico have continued Y/Y gains throughout 2019
- **TO/FROM MEXICO VIA AZ BPOE** Total U.S. trade \$6.5 billion total goods crossing the border in 2019 Q3 up 8.3% from 2018 Q3. Commodities flowing via Arizona BPOE are approaching 2013 highs, reversing a downward trend since 2014.
- **FRESH PRODUCE VIA AZ BPOE** \$260.2 million total produce imports in 2019 Q3 up 41.0% from 2018 Q3. Annual fresh produce trade volume remains relatively consistent and had the highest Q3 volume in 4 years.





City of Nogales General Plan



Major Area Attractions

Historic Sites and Buildings

In addition to their strategic location in the Mexico-U.S. border region, Santa Cruz County and the City of Nogales have 200 properties listed in the National Register of Historic Sites, including Tumacacori National Monument visited by Father Kino in 1691 and Tubac Presidio, established by the Spanish in 1752 on an Indian village site. Others include the Old Tubac Schoolhouse, Old Nogales City Hall, Santa Cruz County Courthouse, and Patagonia Railroad Depot. Nogales' original city hall houses the Pimeria Alta Historical Society Museum.

The Patagonia Sonoita Creek Sanctuary, 19 miles east, attracts worldwide visitors to see its diverse bird life. Nearby are Parker Canyon, Pena Blanca Lake and Patagonia Lake State Park. Visitors also enjoy area ghost towns, mining camps and wineries near Sonoita and Elgin.

Nogales and the Film Industry

Nogales, Arizona, was the filming location for the motion picture version of the musical, *Oklahoma!* (1955). Nogales was chosen because it looked more like turn-of-the-century Oklahoma (where the musical is set) more than anywhere in Oklahoma did at that time. Oklahoma itself had apparently become far too developed by 1955. It was made an "honorary" part of the state of Oklahoma for the duration of the film shoot by order of the governor of Arizona. A small part of William Gibson's *The Gernsback Continuum* short story refers to the city of Nogales. Also, the 1951 biblical motion picture *David and Bathsheba* was filmed in Nogales.

Nogales in the Literature Industry

Joseph Paul Summers Brown was born in Nogales, Arizona in 1930. A fifth generation Arizona and Sonora, Mexico, cattleman, he graduated in journalism at Notre Dame University in 1952. His two best known books "Jim Kane" made into the movie "Pocket Money" that starred Paul Newman and Lee Marvin and "The Outfit" are classics today. Brown received the Will James Society's Big Enough Award for literary achievement in the cowboy tradition in 1999. He also received the Arizona Historical Society's Lawrence Clark Powell Award for lifetime achievement in Southwestern letters in 2003.

Born in Nogales in 1952, Alberto Alvaro Ríos is a well-known local author and poet. He won the 1981 Walt Whitman award for "Whispering to Fool the Wind" and is the author of nine books and chapbooks of poetry, three collections of short stories, and a memoir. He is a Regents' professor of English at Arizona State University in Tempe. His work is regularly taught and translated and has been adapted to dance to both classical and popular music.

The city of Nogales was mentioned as a border crossing point in Carlos Castaneda's "Don Juan" series, and as a gateway into the Mexican Yaqui communities of Sonora.



City of Nogales General Plan

Notable Locals

- **Hyman Capin** - A native of Lithuania, Capin arrived in the US in 1890 and worked his way west to Nogales. A tailor by trade, he took advantage of the military build-up during the Mexican Revolution and designed and manufactured uniforms for the American officers and soldiers. With the closure of Camp Little and the departure of the military, Capin was forced to fold his uniform company, and in 1920, he purchased the El Paso clothing store on Morley Avenue. Five years later, he added La Ville de Paris. The Capin family interests continued to grow, and at one time they included Robinson's True Value, The Americana Motel, and Factory to U clothing.⁷
- **Manuel Escalada** - Born in Northern Spain, Escalada immigrated to the US at the age of 16, and began his career as a clerk in a mercantile store in Texas. He moved to Nogales where, in 1892, he opened a Nogales grocery and dry goods store in partnership with his brother, Leocadi. Escalada was active in the management of the business until his death. Escalada served on the City Council for 9 years, directed the Nogales Building and Loan Association and the Chamber of Commerce. He was instrumental in getting the Nogales paving program started. He died in 1927, but his legacy continues with Escalada Plaza, where the family feed store still serves as a meeting place for local ranchers and a brand-new shopping center that features a Super Wal-Mart.⁸
- **Charles Bracker** - Bracker joined the Nogales mercantile scene in the 1920s after purchasing an army surplus store which later became the forerunner to Bracker's Department Store on Morley Avenue. His family expanded his enterprise, building the El Dorado Motel and taking ownership of the historic Bowman Hotel. In addition to the original Bracker's Department Store and Charlie's on Morley Avenue, the family also owns Bracker's Department Store in Green Valley and Charlie Bracker at the Mariposa Mall.⁹
- **Leonilo Larriva** - Larriva arrived in Nogales in 1915 and started a money exchange and import business, selling gold and silver to the US mint in San Francisco and importing coffee, panocha (candy), and animal hides to the United States. He died young but his cousin, Manuel "Shorty" Martinez came to live with the family and quickly gained a footing in the produce business. In 1944, the family opened Larriva's Ace Electric Company selling appliances, dry goods, and electronics. Larriva's Corporation still exists today and is located at Mariposa Plaza at the corner of Grand Avenue and Mariposa Road.¹⁰
- **Theodore Gebler** - At the age of 48, Theodore Gebler settled in Nogales with his family, opened a hardware store, and eventually served as Director of First National Bank. Since his wife and children preceded him in death and he died without a heir in 1926, he set aside funds in his will for the construction of a building on Grand Avenue to provide for the needy of Santa Cruz County in perpetuity. The trust, known as Associated Charities, is still in existence today. In 2005, the trust dispensed over \$40,000 to local non-profit organizations.¹¹
- **Thomas Aranda, Jr.** - US Ambassador to Uruguay 1981-85, b. 4/9/1934.
- **Alberto Álvaro Ríos** (born September 18, 1952). In 2013, Ríos was named Arizona's first poet laureate, and in 2014, he was elected a Chancellor of the Academy of American Poets.
- **Bob Baffert** – Champion horse breeder and trainer, b. 1/13/1953.
- **Andrew Leo Bettwy** – Arizona State Land Commissioner 1970-78, b. 5/31/1920, d. 12/1/2004.
- **José Canchola** – Businessman, philanthropist. First Hispanic McDonald's franchise owner.
- **Cesar Canez** - Rear Admiral, Mexican Naval Reserve

⁷ Nogales USA website, Notable Natives section at nogalesusa.com

⁸ Ibid.

⁹ Ibid.

¹⁰ Ibid.

¹¹ Ibid.



City of Nogales General Plan

- **Movita Castaneda** - Actress best known for being the second wife of actor Marlon Brando.
- **Travis Edmonson** - of 1960's influential folk duo "Bud & Travis"
- **John Frederick (Jack) Hannah** - Academy Award winning Disney Studios artist and director.
- **Elena Mix Johnson** - Still life and landscape artist.
- **Christine McIntyre** - Actress. Starred in 22 feature films. Most notably as supporting character in Three Stooges movies.
- **Charles Mingus** - Jazz bass player, composer, and bandleader, b. 4/22/1922 in Nogales, d. 1/5/1979.
- **Roger Smith** - Husband to Movie star Ann Margret
- **Verita Bouvaire-Thompson** - Actress, hairdresser. Humphrey Bogart's mistress from 1942 to 1955.
- **James David Lowell** - One of the world's most successful exploration geologists and the 2003 recipient of the Penrose Gold Medal for outstanding contributions to economic geology. b. February 1928



Alberto Álvaro Ríos, Arizona's first poet laureate.



City of Nogales General Plan

Environmental Infrastructure

Nogales, Arizona is located 60 miles south of Tucson, Arizona in the mid-southernmost portion of Santa Cruz County. Nogales, Sonora, México lies directly south of Nogales, Arizona across the international border. Nogales, Sonora is 140 miles north of Hermosillo, Sonora.

The City of Nogales, Arizona encompasses 21 square miles (54 square kilometers) and lies 3,865 feet above sea level. With the Pajarito and Atascosa Mountains about 7 miles west and the Patagonia Mountains roughly 13 miles east, Nogales, Arizona rests between the two mountain ranges in the Nogales Wash. The elevation decreases from south of the U.S./México border heading north towards Tucson and ultimately Phoenix, Arizona. Thus, under calm wind conditions, the nighttime drainage is typically from south to north along the Nogales Wash. **Exhibit 5** shows physical setting.

Ambos Nogales Watershed

A watershed is defined as a catchment basin, which is delineated topographically and drained by a stream system; it is a hydrological unit used for the planning and management of natural resources (Brooks and others, 1997). Components of a watershed include water, topography, soils, rock, vegetation, wildlife, climate and land-use. The U.S. Geological Survey, Southwest Geographic Science Center delineated the Ambos Nogales Watershed. The point at which the Nogales wash enters the Santa Cruz River was determined to be the outlet of the Nogales wash tributary system and that point was used as a pour point in the watershed's delineation. The result of USGS digital construction of transborder watershed delineation identifies the areas of land within Mexico that are immediately contributing to the pour point or headwaters located in the United States. The Nogales Wash watershed covers 235 square kilometers, just under half of the area is in Mexico. The topography is the major factor that identifies this basin boundary. Drainage in the basin is asymmetric and clearly focused along the eastern edge.

Hydrology

The stream flow emanating from a watershed is the result of many integrated influences of the watersheds physical composition. The amount of water received through precipitation and how this water is distributed through space and time defines the watershed itself. The Nogales wash is a gaining stream, which receives water from the local groundwater table in addition to discharge from the border area upstream. The Santa Cruz River, which is located in southern Arizona and northern Sonora, Mexico, flows into the Gila River and then into the Lower Colorado River. There are numerous problems associated with the understanding of the Santa Cruz River system's surface flows and groundwater/surface water relationship (US-EPA, 1996).

The Nogales Wash is a nested tributary within the Santa Cruz River drainage basin and has been identified as major sources of possible contaminant contribution to water in the downstream reach of the Santa Cruz River. Utilizing the predefined Upper Santa Cruz watershed boundary in the United States, identified by the U.S. Environmental Protection Agency in the "Surf Your Watershed" Website (US-EPA, 2000), pour points were identified and Upper Santa Cruz transborder watershed was created by the USGS Southwest Geographic Center.

The Southwest Geographic Center developed a Digital Elevation Model, which was used to model the effects of land topography in the watershed delineation by identifying the streams, flow direction and a catchment perimeter or that portion of the land that effects a given outlet (Maidmont, 1993). Surface runoff flow paths are from ridge tops. Runoff flows from watershed boundaries toward the dissecting channels in which the flow accumulates toward the downstream discharge point. The surface runoff from each segment of land surface has its own unique flow path and velocities by which it reaches any designated point. In the Nogales area, during periods of surface runoff, the two sources of stream flow are surface runoff and groundwater discharge. When precipitation stops, the surface runoff rapidly ceases. Exhibit 6 shows rivers and washes.



City of Nogales General Plan

Geologic Setting

The sedimentary rocks in the Nogales Wash-Upper Santa Cruz Valley are Miocene to Holocene, chiefly alluvial sand and gravel deposits of fans, valley centers, terraces, and channels. On the basis of age, stratigraphic position, and degree of consolidation, these rocks can be separated into two basin-fill units overlain by surficial deposits as follows; (1) lower basin-fill unit or Nogales Formation, probably lower and middle Miocene, and poorly to moderately well consolidated, (2) upper basin-fill unit, upper Miocene to lower Pleistocene, and unconsolidated to poorly consolidated, and (3) Pleistocene and Holocene surficial deposits including alluvium of stream channels, flood plains, and terraces, unconsolidated overall but locally well indurated (Houser and others, 1985; Dickinson, 1991). Significant differences in porosity indurated (Nelson, 1963; Drewes, 1971, 1972, 1980; Cooper, 1973; Simons, 1974); and saturated bulk density exist between the lower and upper basin-fill units with the Nogales formation having the greater induration and the lower yields of water wells as compared to the upper basin fill (Gettings and Houser, 1997).

The lower slopes of the Atascosa Mountains on the western side of the valley are composed of Tertiary volcanic rocks. The Pajarito (US) and Cerro Pedregoso Mountains (MX), located along the international border west of Nogales, consist of Cretaceous volcanics. The San Cayetano and Patagonia Mountains are on the eastern side of the Nogales Wash and upper Santa Cruz Valley. These mountains are made up of a variety of rocks including igneous, metamorphic, volcanic, and sedimentary rocks ranging in age from Precambrian to Miocene (Drewes, 1980; Simons, 1974).

The northern slopes of Cerro El Ocotillo, lying on the northwestern flanks of Sierra El Pinito, is made up of Cretaceous granitic rocks cropping out from beneath a cover of Tertiary sediments equivalent to the Nogales Formation.

Two roughly parallel sub basins are defined in the immediate area of the Nogales twin cities by a complex interpolation of Bouguer gravity data and stratigraphic-structural geologic information: 1) the Nogales sub basin, and 2) the upper Santa Cruz sub basin (Gettings and Houser, 1997).

The Nogales sub basin forms a northwest-trending approximately 5 km wide trough that begins near Pesquiera Canyon at its northwest parameter, narrows through the Nogales urban corridor and terminates in the southeast near La Calera, Sonora. The basin is estimated to reach a depth of about 700 m in the northwest and shallows to some 250 m in its southeastern edge. The upper Santa Cruz sub basin and the course of the river appear to be controlled along the Mt. Benedict fault.

The sub basin underlies one of the narrower valleys in southern Arizona (8 to 12 km wide) suggesting that the basin it overlies has undergone only minor to moderate lateral extension during the late Cenozoic (Gettings and Houser, 1997). Because there is a general positive correlation between basin width, amount of extension, and basin depth, the narrow span of the valley suggests that the basin is shallow. Other indications of a shallow depth to the basin include: (1) weak Bouguer gravity anomalies of the basin (Gettings and Houser, 1997), (2) the absence of lacustrine or playa sediments in the basin fill implying that the basin was never closed, and (3) ubiquitous outcrops of the Nogales Formation in the area suggesting that basin subsidence stopped after the Formation was deposited.

Geophysical data (aeromagnetic and gravity) indicate the possibility of at least two other sub basins within the Ambos Nogales area (Consejo de Recursos Minerales, 2000) that may merit further delineation. The Mariposas sub basin is a northeast-trending anomaly that roughly follows along Las Mariposas tributary. The approximately 5 km-wide area is connected to the Nogales sub basin in the northeast and extends to the la Bellotosa -El Pajarito pueblos region in to the southwest in Mexico. The southernmost sub basin intersects the southern tip of the watershed and is a roughly rectangular feature located due east of Cerro El Ocotillo. The tributary La Cason and Mexico highway 15 dissects the area.



City of Nogales General Plan

Topography

Ambos Nogales is located in the Sonoran Desert. This desert covers 120,000 square miles and has a minimum elevation of 2,500 feet (McGinnies 1976). The Sonoran Desert is in the Basin and Range topographic province, characterized by north-south elongated valleys surrounded by mountain ranges. Ambos Nogales is located in such a valley created by the Nogales Wash, a tributary of the Santa Cruz River. The mean elevation in Nogales, Arizona is 3,865 feet, while that in Nogales, Sonora is 4,265 feet (Instituto Nacional de Estadística Geografía e Informática 2005).

Mountain ranges near Ambos Nogales include the Patagonia Mountains to the east and the Tumacacori, Atascosa, and Pajarito mountains to the west. Approximately 25 miles to the north are the Santa Rita Mountains and Madera Canyon in the Coronado National Forest, where Mount Wrightson rises to an elevation of 9,432 feet.

Northwest of Interstate 19 are the Cerro Colorado, Las Guijas, and Sierrita Mountain Ranges. In Nogales, Sonora the highest elevation areas (5,380 feet) are in the Cerro de los Nogales (Nogales' Hill), west of where the Obregón and Colosio routes meet, near the southern end of the city. Exhibit 7 shows topographic contours.

Vegetation

According to the vegetation regions of North America, Nogales lies within the Southwestern Desert Shrubs region. This is the driest range with average annual precipitation 6-12 inches per year. The region is dominated by sage, creosote bush, sagebrush and greasewood shrubs. Short grasses occur with desert cacti and some Juniper and Pinyon Pine exist in the Northern areas. The shrub land/rangeland is hydrologically very similar to historical accounts although some cattle trampling and vegetation removal increases runoff and erosion unnaturally. (Brady et. al 2001). Exhibit 8 shows generalized vegetative communities and riparian corridors.

The Guide to Native Vegetation of Ambos Nogales (Day 2002) lists common native plants in Nogales to include Madrean Evergreen Woodland and Semi-Desert Grassland. Grasses in these two major zones include cane beardgrass (*Bothriochloa barbinodis*), blue grama (*Bouteloua gracilis*), and tanglehead (*Heteropogon contortus*). Trees include emory oak (*Quercus emoryi*), catclaw acacia (*Acacia greggii*), alligatorbark juniper (*Juniperus deppeana*), one-seed juniper (*Juniperus monosperma*), Arizona cypress (*Cupressus arizonaica*), velvet mesquite (*Prosopis velutina*), and ironwood (*Olneya tesota*). Shrubs include trailing indigo bush (*Dalea greggii*), creosote bush/greasewood (*Larrea tridentata*), velvet pod mimosa (*Mimosa dysocarpa*), ocotillo (*Fouquieria splendens*), kidneywood (*Eysenhardtia polystachya*), turpentine bush (*Ericameria laricifolia*), and desert honeysuckle (*Anisacanthus quadrifidus* var. *wrightii*). Wildflowers include lupine (*Lupinus*), superb penstemon (*Penstemon superbus*), mexican hat (*Ratibida calumnaris*), and desert marigold (*Baileya multiradiata*). Cacti and other succulents include the hedgehog cactus (*Echinocereus*), engelmann prickly pear (*Optunia engelmannii*), mountain yucca/Spanish bayonette (*Yucca x schottii*), banana yucca (*Yucca baccata*), and parry's agave (*Agave parryi*). Plants that require special attention (water) in Nogales include cottonwood (populus), mountain cottonwood, Arizona walnut (*Juglands major*), eucalyptus (*Eucalyptus*), willow (*Phillyraeoides*), and common privet (*Ligustrum*). (Day 2002).

Soils

The soil acts like a large sponge to hold infiltrated water and percolation increases as soils get wetter until the point of saturation, which is rare in dry areas like Nogales, where the soil mantle has the first opportunity to intercept the precipitation and little to no groundwater recharge occurs (Saxton and Shiao, 1990). According to the FAO-UNESCO of 1975, the Nogales area lies within the characterized 12b soil region. This is dominated by Vermosols, hot and dry, dominated by plains and alluvial fans with only occasional mountain ranges. Surface runoff is generally limited to local floods caused by intense rain and is often absorbed by drier regions downstream.



City of Nogales General Plan

The USDA, Natural Resource Conservation Service (NRCS), offers the State Soil Geographic (STATSGO) Data Base is the only digital publication of an area within Santa Cruz County (USDA-NRCS, 1995).

Geomorphology

The basin area is approximately 24,435 hectares (60,380 acres). In arid lands, where channels absorb stream flow, runoff decreases with increasing basin size. This was described in watershed studies in nearby Tombstone, Arizona, according to a relationship described by Glymph and Horton (1969). Due to the 244 square kilometer basin size, Nogales Watershed yields only 8 millimeters mean annual runoff to its outlet from precipitation. Compared to the 448.5 millimeters of precipitation received by the watershed, only 1.7% of what hits the ground ends up in the creek.

Slope of the ground surface is a factor in the overland flow process and very important hydrologically in small basins where it may be the dominant factor in determining hydrograph shape. The influence of slope is most relevant to indices of peak flow and to hydrograph shape. Average slope in the Nogales Wash watershed is approximately 3 degrees, the standard deviation from the average is approximately 3 while minimum slope is 0 and maximum slope is 29 degrees.

Drainage Density

Drainage density is a measurement of channel length over area of basin. The total length of all streams in the watershed is 173 kilometers, which when divided by the basin area of 244 square kilometers, gives a drainage density of 0.7 km/km². Very low drainage density occurs where soil materials are resistant to erosion or, conversely, are very permeable and

the relief is small. The hydrologic significance of drainage density results from the fact that water and sediment yields are very much influenced by the length of the watercourses per unit area. The channel networks are developed by long-term hydrology and erosion but, in turn, affect the amount and rate of watershed discharge. Melton (1957) discusses the relationship between low runoff rates and low drainage density both true in the Nogales watershed.¹²

Santa Cruz Active Management Area

The Santa Cruz Active Management Area (AMA) covers 716 square miles in the Upper Santa Cruz Valley River Basin. It is principally concentrated around a 45-mile reach of the Santa Cruz River from the international border to the Continental gaging station, a few miles north of the Santa Cruz/Pima County line. Along this reach, the river is characterized as an intermittent desert stream that contains uninterrupted perennial and effluent dominated reaches. The drainage area of the Santa Cruz River upstream from Continental is about 1,680 square miles.

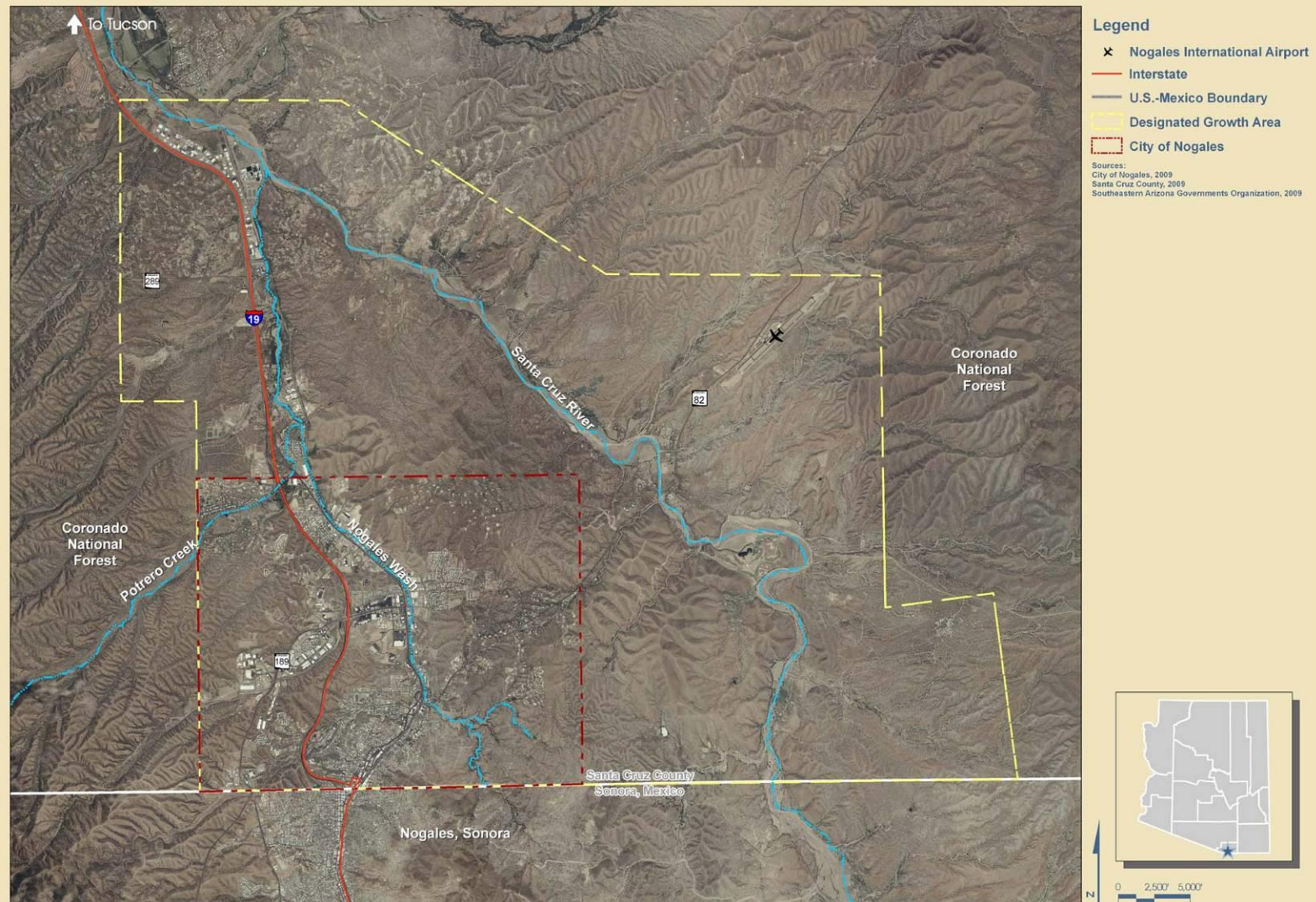
From its headwaters in the San Rafael Valley, the river flows southward approximately 9 miles and enters Mexico. During its 35-mile course through Mexico, the river continues its southward flow for a short distance and then bends northward and enters Arizona 5 miles east of Nogales. Within the United States, the Santa Cruz River continues northward for 65 miles from Nogales to Tucson, where it continues beyond to the confluence of the Gila River.

¹² *Critical U.S./Mexico Borderland Watershed Analysis, Twin Cities Area of Nogales, Arizona and Nogales, Sonora*, by Laura Margaret Brady, Floyd Geay, Mario Castaneda, Mark Bultman, and Karen Sue Bolm, U.S. Geological Survey, Southwest Geographic South Center, School of Natural Resources, University of Arizona.



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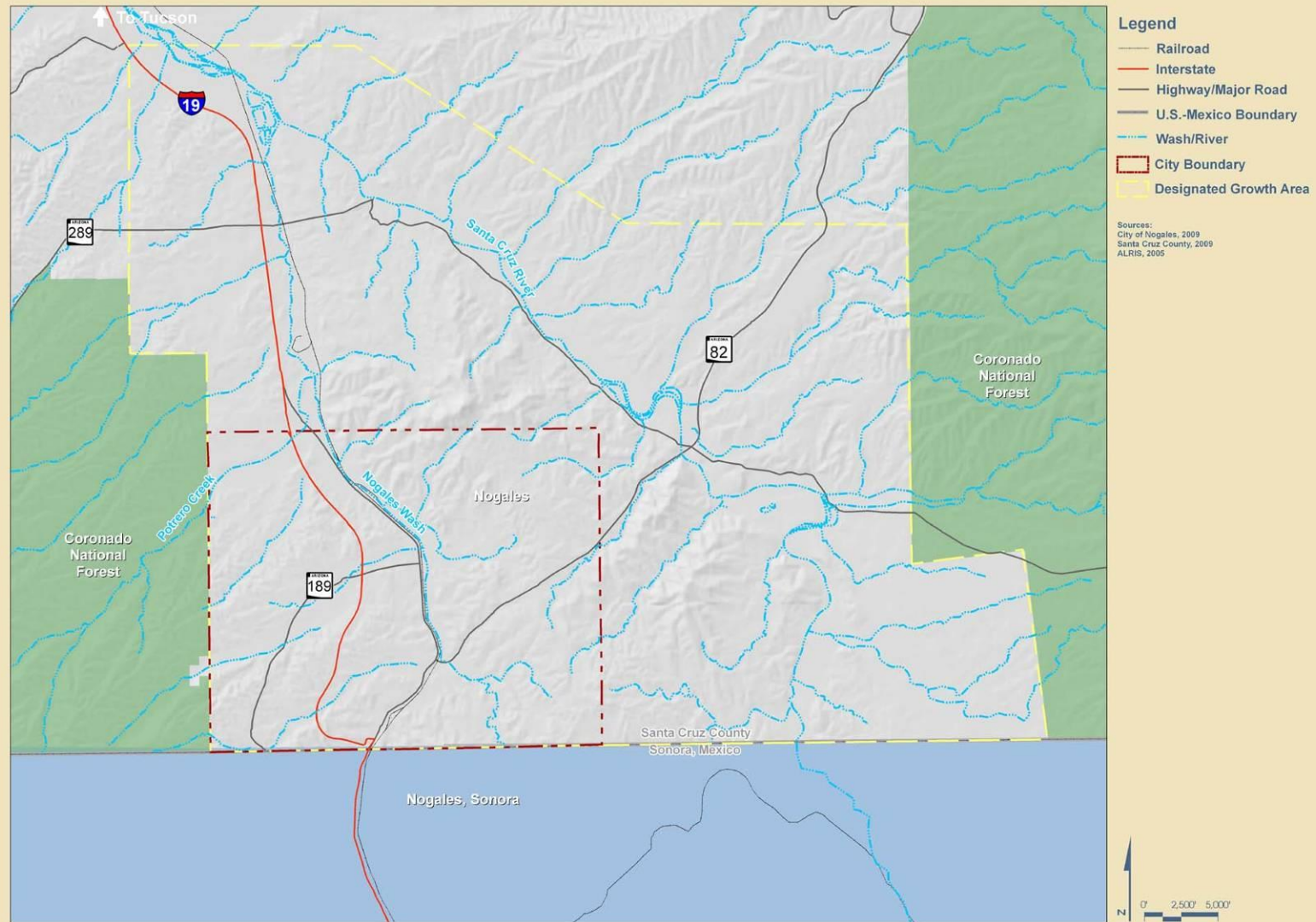
EXHIBIT 5: PHYSICAL SETTING





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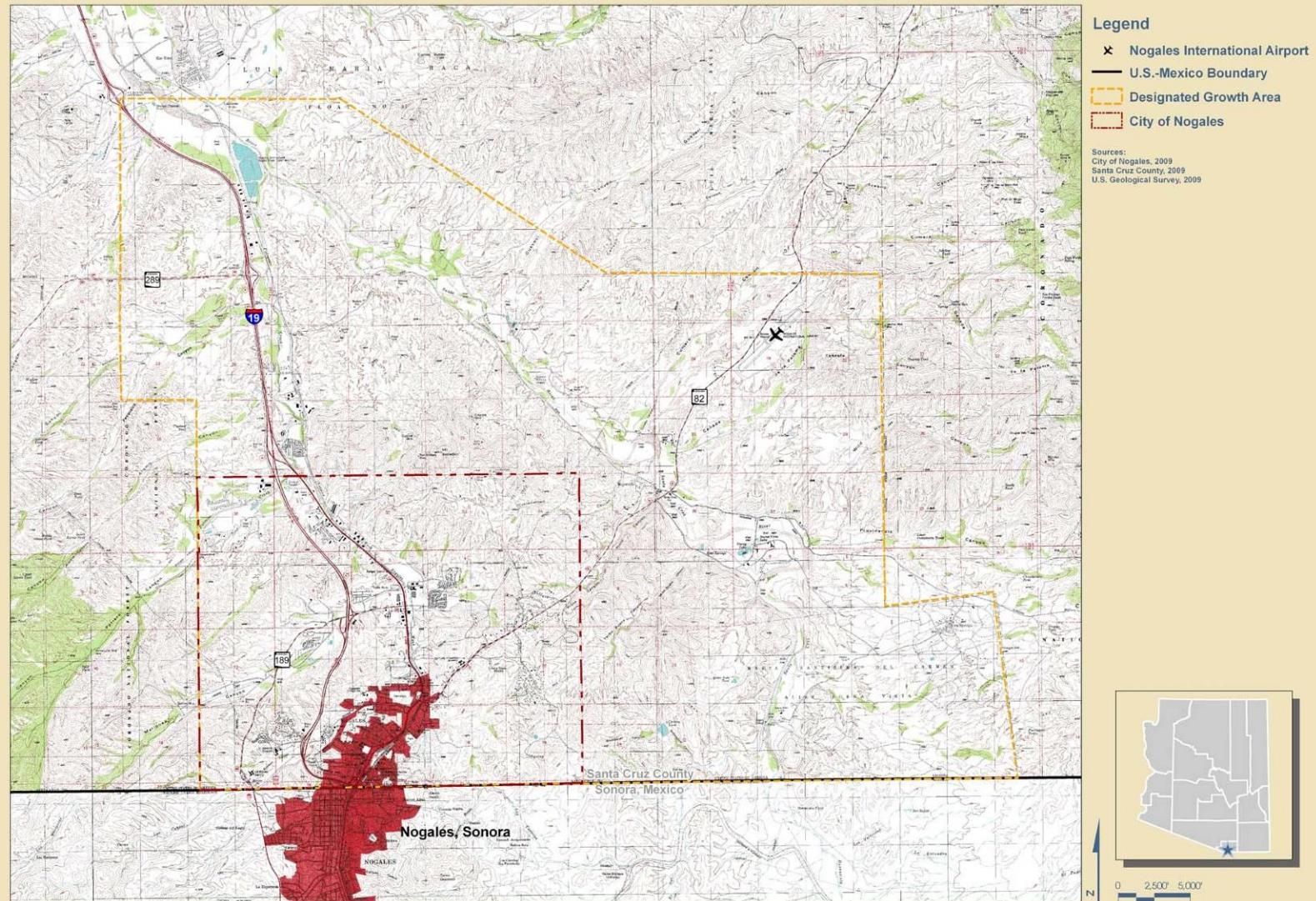
EXHIBIT 6: RIVERS AND WASHES





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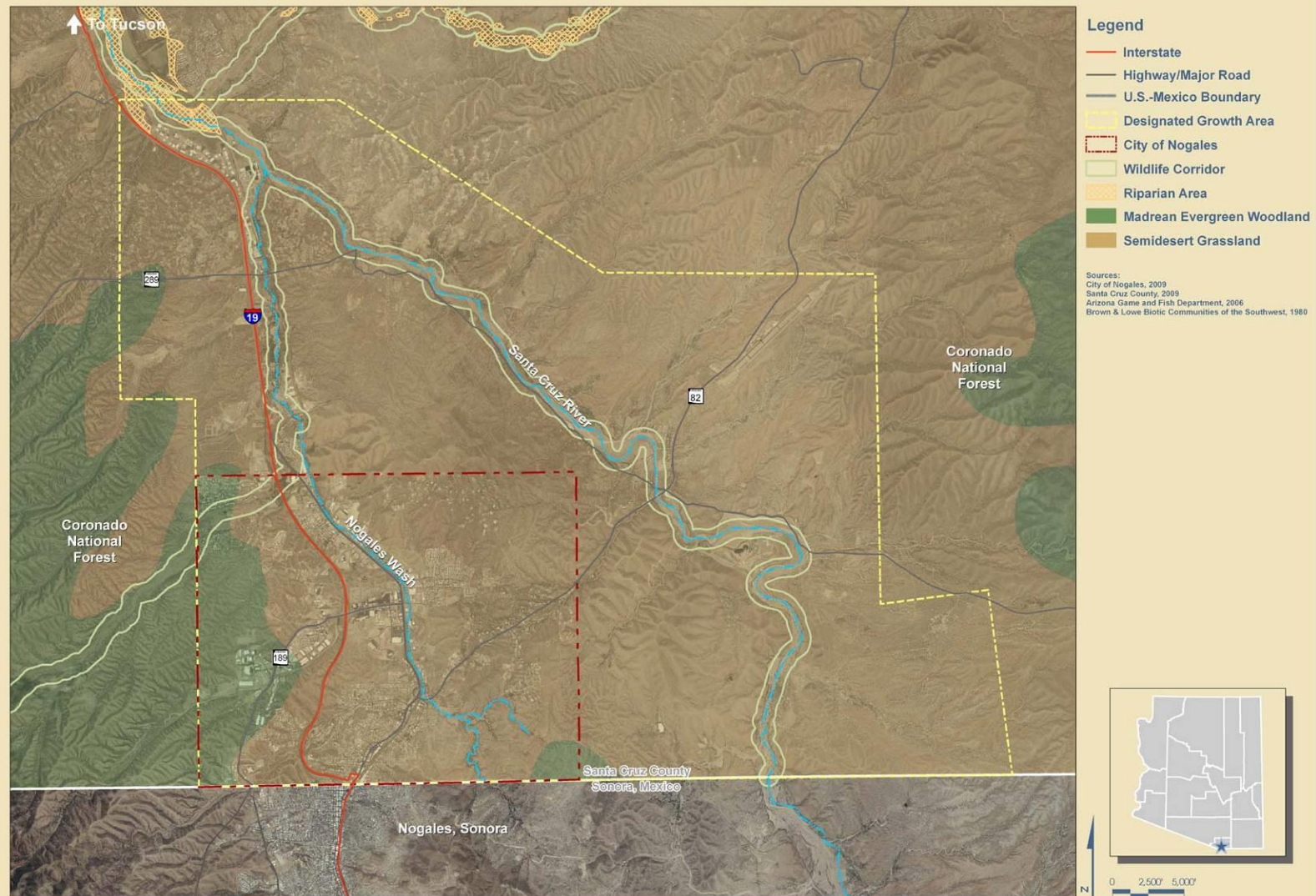
EXHIBIT 7: TOPOGRAPHY





City of Nogales General Plan

EXHIBIT 8: VEGETATIVE COMMUNITIES





City of Nogales General Plan



Source: Arizona Department of Environmental Quality,
Air Quality Division, 2007

Transportation and Circulation

Greater Nogales is situated near key markets with Phoenix, Tucson, Las Vegas and Southern California within an 8-hour radius and Salt Lake City, Denver, Houston and Dallas within 16 hours by highway. Guaymas and Hermosillo, Mexico are just 5 hours away by highway 15.

Major highways in the Nogales, Arizona area are Arizona State Route 82, which connects Nogales, Arizona with Patagonia, Arizona (19 miles) and Sonoita (31 miles) to the northeast, and U.S. Interstate 19 which connects Tucson, Arizona to Nogales, Arizona and continues south into México, where it becomes Federal Highway 15. Illustration on the left shows highway system in Arizona and Sonora. **Exhibit 9** shows functionally classified roadways serving Nogales, Arizona.

The Alvaro Obregón Boulevard, Luis Donaldo Colosio Boulevard, and the Corredor Fiscal toll road are the main transportation routes in Nogales, Sonora. The Alvaro Obregón Boulevard runs the length of the narrow Nogales Wash valley and is a highly congested route used by local and some cross-border commercial traffic.

The Corredor Fiscal is a toll road for cross-border commercial traffic, and its on- and off-ramp access is limited to the border junction at Mariposa Road, and in the south outside of the city limits of Nogales, Sonora. This road absorbs the majority of cross-border commercial traffic.

CANAMEX Corridor

Nogales is positioned at the United States southern entry of the CANAMEX trade corridor connecting Western Canada with Mexico's Pacific Coast and Mexico City. The location is ideal for businesses who collaborate with Mexico's West Coast supply chain. Average manufacturing costs in Mexico are now almost 20 percent lower than in China.



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Proposed I-11 Corridor

The Federal Highway Administration (FHWA) and Arizona Department of Transportation (ADOT) are conducting the environmental review process for the Interstate 11 (I-11) Corridor from Nogales to Wickenburg, Arizona. This Draft Tier 1 Environmental Impact Statement and Preliminary Section 4(f) Evaluation (Draft Tier 1 EIS) has been prepared as part of this process in accordance with the National Environmental Policy Act (NEPA) and other regulatory requirements. FHWA is the Federal Lead Agency and ADOT is the local project sponsor under NEPA. As the federal lead agency, FHWA is responsible for compliance with NEPA and related statutes.

The concept of a high-capacity, north-south interstate freeway facility connecting Canada and Mexico through the western United States (US) has been considered for more than 20 years. It was initially identified as the CANAMEX trade corridor in the 1991 Intermodal Surface Transportation Efficiency Act, established under the North American Free Trade Agreement in 1993, and defined by the US Congress in the 1995 National Highway Systems Designation Act (Public Law 104-59). CANAMEX was designated as High-Priority Corridor #26 in the National Highway System, recognizing the importance of the corridor to the nation's economy, defense, and mobility.

This NEPA process builds upon the prior I-11 and Intermountain West Corridor Study (IWCS), a multimodal planning effort completed in 2014 that involved ADOT, Nevada Department of Transportation (NDOT), FHWA, Federal Railroad Administration (FRA), Maricopa Association of Governments (MAG), Regional Transportation Commission of Southern Nevada (RTC), and other key stakeholders. The IWCS identified the I-11 Corridor as a critical piece of multimodal infrastructure that would diversify, support, and connect the economies of Arizona and Nevada.

In December 2015, the US Congress approved the Fixing America's Surface Transportation Act (FAST Act), which is a 5-year legislation plan to improve the nation's surface transportation infrastructure. The FAST Act formally designates I-11 as an interstate freeway throughout Arizona, reinforcing ADOT's overall concept for I-11 that emerged from the Intermountain West Corridor Study (IWCS). The Draft Tier 1 EIS is the next step in the continuum of project development activities for the I-11 Corridor between Nogales and Wickenburg.

The I-11 Study Area

The I-11 Corridor Study Area (Study Area) extends into five counties (Santa Cruz, Pima, Pinal, Maricopa, and Yavapai); 13 municipalities (Nogales, Sahuarita, South Tucson, Tucson, Oro Valley, Marana, Eloy, Casa Grande, Gila Bend, Goodyear, Buckeye, Surprise, and Wickenburg); and two Tribal communities (Tohono O'odham Nation and Pascua Yaqui Tribe).

The southern boundary of the Study Area was confirmed as the I-19/SR 189 interchange in Nogales, where improvements to address the connection to the Sonora-Arizona border are planned.

Need for the Proposed Facility

The assessment of needs associated with I-11 from Nogales to Wickenburg builds upon the IWCS and its accompanying Planning and Environmental Linkages document (NDOT and ADOT 2014). Key transportation-related problems and issues in the Study Area were identified based on a combination of previous studies and input from agency coordination and public involvement during the I-11 Corridor Study scoping process.



City of Nogales General Plan

The problems, issues, and opportunities identified in the Study Area include:

- **Population and employment growth:** High-growth areas need access to the high-capacity, access-controlled transportation network.
- **Traffic growth and travel time reliability:** Increased traffic growth reduces travel time reliability due to unpredictable freeway conditions that impede travel flows and hinder the ability to move people and goods around and between metropolitan areas efficiently.
- **System linkages and regional mobility:** The lack of a north-south interstate freeway link in the Intermountain West constrains trade, reduces access for economic development, and inhibits efficient mobility.
- **Access to economic activity centers:** Efficient freeway access and connectivity to major economic activity centers are required for operations in a competitive economic market.
- **Homeland security and national defense:** Alternate interstate freeway routes and regional route redundancy help alleviate congestion and prevent bottlenecks during emergency situations. These routes may be parallel or may generally serve the same major origin and destination points, with local or regional roads connecting the freeways.

Purpose for the Proposed Facility

Given the need for greater connectivity and travel time reliability as population and employment continue to increase in the Study Area, the purpose of the I-11 corridor is to:

- Provide a high-priority, high-capacity, access-controlled transportation corridor to serve population and employment growth.
- Support improved regional mobility for people and goods to reduce congestion and improve travel efficiency.

- Connect metropolitan areas and markets in the Intermountain West to Mexico and Canada through a continuous high-capacity transportation corridor.
- Enhance access to the high-capacity transportation network to support economic vitality.
- Provide for regional route redundancy to facilitate efficient mobility for emergency evacuation and defense access.



FHWA High Priority Corridors in the Western US.



City of Nogales General Plan

US-Mexico Connector

The Mariposa Port of entry, a state-of-the-art facility for the processing of both commercial and non-commercial traffic, is the principal connector between the US and Mexican federal highways systems on the Arizona-Sonora border. Mexico's highway 15 (MX-15) connects Mexico's central and Pacific corridors with Arizona and Western United States. MX-15 connects Mexico City along with the states of Mexico, Jalisco, Michoacan, Nayarit, Sinaloa and Sonora with the border at Nogales, Arizona. On the US side, the Mariposa port of entry is connected by Arizona State Route 189 (SR-189), a 4-mile connector to Interstate 19 (I-19).



Ongoing Transportation Efforts

Two processes are running concurrent to this General Plan Update:

- The Pathway Project along Grand Avenue & Frank Reed Road, Nogales; and
- The Santa Cruz County Regional Transportation Authority Study

Pathway Project Along Grand Avenue & Apache Boulevard

On March 10, the City of Nogales Engineering Department submitted a CMAQ-Initiation Letter to the Arizona Department of Transportation (ADOT) Public Agency Section requesting initiation of a Congestion Mitigation and Air Quality Improvement (CMAQ) program funded project and assignment of an ADOT project number for the Pathway Project Along Grand Avenue & Apache Boulevard. CMAQ is a federally funded program of surface transportation improvements designed to improve air quality and mitigate congestion.

The Pathway Project consists of the design and construction of a multiuse bicycle/pedestrian pathway on the east side of Grand Avenue from Baffert Drive to Country Club Drive with a spur connection to the Nogales High School located on the south side of Apache Boulevard.

Concept developed as part of the adopted General Plan guided the Pathway Project. See concept adopted in the current General Plan included in the following page.



City of Nogales General Plan



El Paseo de Los Nogales Concept (Adopted General Plan)

Alternatively, if determined necessary during the design, the pathway could be constructed on the west side of Grand Avenue if Union Pacific does not agree with the project location on the east side. That decision will be made early in the design process in discussions with the UPRR.

The City of Nogales is in the process of coordinating and working with SEAGO to amend the Transportation Improvements Plan (TIP) as it relates to this project. The TIP amendment will include:

1. Increasing the design funds from \$128,486 to \$350,000; an increase of \$221,514
2. Programming the construction for FY 2023 – it is currently shown in FY 2021
3. Increasing the construction funds from \$676,331 to \$945,000; an increase of \$268,669

The total funding request is for \$1,249,475 in Federal CMAQ funds which is 94.3% of the estimated total project cost of \$1,325,000.

A copy of the current SEAGO 2020-2024 TIP page highlighting all phases of the project was previously submitted to the ADOT LPA Section. The current total amount of CMAQ approved and programmed for this project is \$804,817. The City of Nogales will furnish the amended TIP page(s) once this action has been approved and consummated by SEAGO.

It is understood the project initiation will be required to be reviewed and approved by the Project Review Board (PRB), Priority Planning Advisory Committee (PPAC), and the State Transportation Board before an IGA can be executed for the project.

Santa Cruz County Regional Transportation Plan 2045

The Santa Cruz County Regional Transportation Commission (RTC) has begun work on the 2045 Santa Cruz County Regional Transportation Plan (RTP). The RTP is a long-range transportation plan that identifies multi-modal transportation needs (highway, local road, transit, bicycle, pedestrian, etc.), and include a financially feasible list of priority transportation projects for the County.

Currently, the RTC is soliciting input on priority transportation projects to improve the transportation network (automobile, bus, bicycle, pedestrian, truck movement, etc.) for everyone in Santa Cruz County, taking into account the region's limited funding.

The Regional Transportation Plan (RTP) in the United States is a long-term blueprint of a region's transportation system. Usually RTPs are conducted every five years and are plans for thirty years into the future, with the participation of dozens of transportation and infrastructure specialists. The plan identifies and analyzes transportation needs of the metropolitan region and creates a framework for project priorities.



City of Nogales General Plan

Previous Transportation Plans

Various studies, plans, and policies have been developed to respond to the community needs. Planning documents reviewed in preparation for this chapter include:

- Nogales Bicycle and Pedestrian Master Plan/Royal Road Multi-Use Path (2018) Nogales and ADOT
- Morley-Banker-Hohokam Bike Route Design Concept Report (January 2016) Nogales, Arizona
- Regional Transportation Coordination Plan Update 2018-2019 (2018) SEAGO
- Santa Cruz County Comprehensive Plan (2016) Santa Cruz County
- ADOT Rio Rico Walking and Biking Study (July 2013) Santa Cruz County
- ADOT Arizona-Sonora Border Master Plan (February 2013) ADOT and Federal Highway Administration (FHWA)
- City of Nogales PARA Pedestrian Circulation at Port of Entries (January 2012) Nogales, Arizona
- Unified Nogales Santa Cruz County Transportation Plan 2010 (April 2010) Unified Nogales Santa Cruz County
- City of Nogales General Plan (August 2010) Nogales, Arizona

Documents listed above identify key improvements to the local and regional transportation network. These recommended improvements seek to improve the safety and mobility of pedestrians, cyclists, and motorists as they traverse the city and are summarized in the following pages.

Nogales Bicycle and Pedestrian Master Plan/Royal Road Multi-Use Path 2018

The City of Nogales, Arizona strives to be a pedestrian and bicycling friendly community. The Nogales Bicycle and Pedestrian Master Plan/Royal Road Multi-Use Path prepared in partnership with ADOT is a guiding document providing direction on pedestrian and bicycling investments within the city.

The ability to bike and walk are important to Nogales' future as they potentially alleviate several challenges such as safety, connectivity and public health; all while providing a sense of community. By planning a multi-modal transportation network, the city can enhance the overall lifestyle and livability of the community.

The purpose of this plan is to provide safe pedestrian and bicycle connections within the existing transportation system and develop new facilities within strategic corridors currently lacking multi-modal facilities. The needs, issues, and opportunities within the community will be documented through working papers and eventually the Final Master Plan. Ultimately, the Plan will develop a prioritization of specific bicycle and pedestrian improvement projects and identify potential funding sources.

Key Findings

The review of Nogales existing conditions resulted in several key findings which will help in developing context-specific solutions which increase the safety and mobility of pedestrians and cyclists. Key findings are listed below.



City of Nogales General Plan

Critical Corridors

There are six critical corridors within Nogales that do not currently provide or connect to bicycling or pedestrian facilities. The corridors were identified by the City as important routes to study. These corridors were evaluated to understand the existing conditions, opportunities and constraints, and identify recommendations for multi-modal infrastructure. These corridors include:

- Grand Avenue/ I-19 Business - North of Baffert Drive (2.0 miles)
- Patagonia Highway (SR-82) - East of existing sidewalks (2.1 miles)
- Frank Reed Road (Formerly Apache Blvd) - North of Nogales High School (0.7 miles)
- Mariposa Road From the existing Land Port of Entry (LPOE), to I-19 and the high school area (2.4 miles)
- Target Range Road/Western Avenue - East of Mariposa Road to Grand Avenue (2.5 miles)
- Royal Road - South of Patagonia Highway (0.9 miles)

One of the recommended improvements for cyclists is outlined in the *Morley-Banker-Hohokam Bike Route Design Concept Report*. Local biking organization OS3 ("Zero Stress") petitioned the City to study the corridor in order to increase the safety of riders during their Friday night rides. The route runs north-south along Morley Avenue, Bankerd Avenue, and Hohokam Drive -- just east of the Union Pacific rail and Grand Avenue/I-19 Business corridor. The plan suggests a combination of share-the-road lane markings and dedicated bike lanes along the route and provides multiple options at several key locations. A final alignment has yet to be determined.

Live and Work Disconnect

With the exception of the central commercial district, residential areas are separated from working areas by edges. There are several edges that act as barriers to mobility in Nogales. The I-19 corridor and I-19 Business/Grand Avenue/Union Pacific corridor act as barriers to east-west

travels, whereas the hilly-topography generally limits mobility in all directions. This has led to much of the commercial areas being developed in-between these edges along the north-south spine, and much of the residential development in pockets towards the outer extents of the city. This disconnect creates a great need for high volume corridors to facilitate all modes of travel, enabling residents to walk and bike to work.

Schools

Many of the schools in Nogales lack adequate sidewalks connecting to residential areas. A Safe Routes to Schools (SRTS) program would help increase education and attention to students getting to school safely. A part of this process will be evaluating the main routes which students take to arrive to school. Several of the previously identified critical corridors such as Frank Reed Road and Target Range Road/Western Avenue, could be considered due to their proximity to residential and school areas. Often times, SRTS programs lead to built improvements to the physical environment, such as better sidewalks or crosswalks.

Border Crossings

The Mariposa and DeConcini/Morley Gate LPOEs are vital connections for the regional economy and for border residents who travel through the gates daily. Work recently completed on the Mariposa LPOE to the west has increased the capacity of commercial vehicles along Mariposa Road/SR-182. These vehicles utilize the interchange at I-19, creating a great need for safety due to the high amount of traffic in this area.

The DeConcini/Morley Gate LPOE allows personal automobiles, rail traffic, and pedestrians to cross the border. Understanding the several hundred feet wide entry that is the DeConcini/Morley Gate, is vital to planning pedestrian and cyclists' routes that can facilitate daily travels over the border.



City of Nogales General Plan

OS3 (Zero Stress)

Efforts by the cyclist advocacy group OS3 have helped facilitate bike awareness and bike safety in the city. Their efforts help educate cyclists and noncyclists alike, as well as offer a fun activity to residents. Utilizing their key insights throughout the planning process will be key in creating a functional multi-modal system in Nogales.

Interstate Crossings

Due to the edge that I-19 presents, Interstate crossing locations in Nogales are key for getting cyclists and pedestrians past I-19. An evaluation of the vertical and horizontal geometry is key creating a safe and connected route for users who pass under the Interstate facility. The crossing at I-19 and Mariposa Road/SR-189 has a high level of traffic volume, traffic collisions, and is adjacent to a several key commercial and school locations.

Standard Cross Sections

As the community develops more of an understanding of how their overall transportation network can facilitate multimodal travel, a standard cross section for each roadway type would help in facilitating consistency across the network. This in turn will increase driver, cyclist, and pedestrian confidence with the road network.

Regional Transportation Coordination Plan Update 2018-2019

Federal Transit Law requires that projects selected for funding under the Elderly Individuals and Individuals with Disabilities (Section 5310) programs be derived from a locally developed, coordinated public transit-human services transportation plan. The purpose of the plan is to identify the transportation needs of individuals with disabilities, older adults, and people with low incomes, provide strategies for meeting these needs, and prioritize transportation services for funding and implementation.

Recognizing that the transit environment is dynamic and ever changing, SEAGO reviews and updates the Regional Transportation Coordination Plan on an annual basis. This Plan Update includes updated regional demographic data, transit capacity building strategies, as well as updated information on new and existing transportation providers serving the transportation dependent and disadvantaged populations in the region.

SEAGO utilizes a process that includes representatives of public, private and nonprofit transportation and human services providers, elected officials, and public participation identify transit needs/service gaps and to establish priorities in order to make informative funding decisions for specialized transportation services.

In the assessment of needs by geographical area, the plan identifies the following gaps in public transportation and intercity transportation service access in Santa Cruz County:

- Fixed route service in Nogales
- Connecting service between Nogales, and Rio Rico, Tubac, and Green Valley
- Connecting service between Nogales, Patagonia, and Sonoita

2019 Update

In 2018, SEAGO worked with Vista Transit, Greyhound, and ADOT to expand intercity service. In September 2018, Greyhound expanded service to include Rio Rico, Nogales, Patagonia, Sierra Vista, and Benson.

Arizona-Sonora Border Master Plan

In 2013, The Arizona Department of Transportation and the Federal Highway Administration partnered in the preparation of the Arizona-Sonora Border Master Plan. The master plan examined travel between the State of Arizona in the United States and the State of Sonora in Mexico at the



City of Nogales General Plan

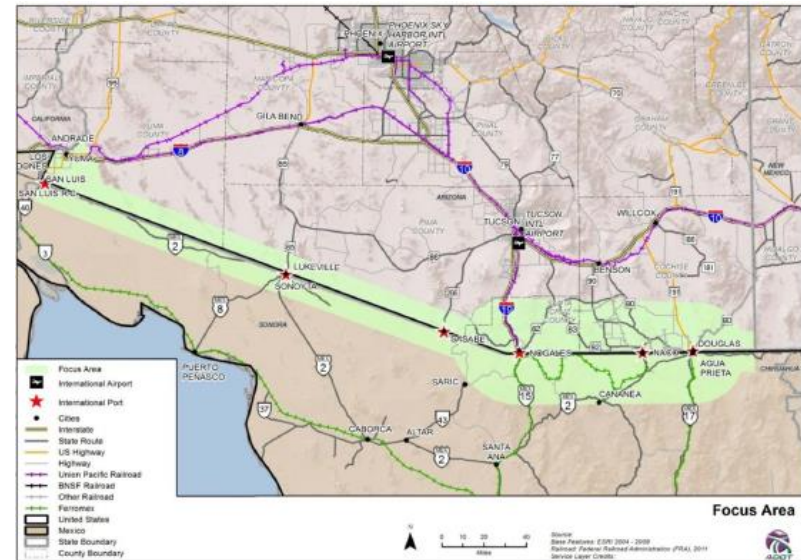
international border. There are nine specific Land Ports of Entry (LPOE) facilitating movements between the two states. The majority of LPOEs have experienced an increase in the movement of people and goods, and the increases are expected to continue to grow in future years as population and economic growth occurs in the border region.

In 2010, more than 23 million people crossed through LPOEs at the Arizona-Sonora border on foot or in various personal or commercial (e.g., bus, freight) vehicles. The Arizona-Mexico Commission reports nearly \$55 million in bi-national trade and \$7.3 million in tourism expenditures are conducted daily through the LPOEs.

Improving the capacity and operational efficiency of the LPOEs and supporting transportation infrastructure is essential to relieving traffic congestion, reducing delays, enhancing safety and security, promoting international trade, and improving the quality of life for residents in the border region. The Arizona-Sonora Border Master Plan presents a comprehensive binational approach to coordinating the planning and delivery of projects to improve traffic operations at each LPOE and enhance the efficiency of the multimodal transportation infrastructure providing access to the LPOEs.

The Arizona Department of Transportation (ADOT) prepared this master plan in collaboration with the Federal Highway Administration (FHWA), Secretaría de Comunicaciones y Transportes (SCT), and the government of the State of Sonora, Mexico.

According to the Arizona-Sonora Border Master Plan, the Nogales Mariposa LPOE accounts for more than 75% of all commercial traffic entering Arizona from Mexico. It is one of the Country's largest port of entry for fruits and vegetable-products with limited shelf lives.



Nogales PARA Pedestrian Circulation at Ports of Entry

Prepared in 2012, this study funded by the Arizona Department of Transportation through their Planning Assistance for Rural Areas grant program is the successor project for the *Unified Nogales/Santa Cruz County Transportation Plan 2010*. The PARA study recommended a pedestrian circulation plan for the City of Nogales in the vicinity of and serving the three Nogales Ports of Entry. These ports are the DeConcini and Morley Gate Ports of Entry in downtown Nogales and the Mariposa Port of Entry to the west at SR 189.



City of Nogales General Plan

The influx of people to Nogales for shopping, work, and entertainment is significant, and most spend some or all of their time walking around the downtown area and through the downtown ports of entry. This pedestrian activity represents a major portion of the City's overall economic activity.

A plan to make the pedestrian's experience more convenient, safer, easier to find their way, and pleasant enhances both the individual's overall experience and the economic development potential for the community.

The focus of this study centered on the pedestrian circulation needs of the downtown Nogales area, especially targeting the pedestrian circulation that moves between Nogales, Sonora, and Nogales, Arizona, through the downtown area's two ports of entry (POEs). The need is evident as over 625,000 pedestrian crossings per month flow through these two POEs, much of it from Mexican citizens crossing into Nogales for retail shopping and services. This commerce is a critical component of the economic base of the Nogales on the Arizona side of the international border.

This study also examined the pedestrian traffic through and using the Mariposa Port of Entry to the west of downtown along SR 189. While this is the commercial port of entry, it does have about 5% of all pedestrian crossings in Nogales. There are no sidewalks connecting this POE to the rest of the community, and pedestrians leaving the port of entry are either picked up or walk along the shoulder of SR 189, a high-speed truck route. Accommodating the pedestrians using the Mariposa POE and connecting them to downtown Nogales, the Walmart shopping district, their workplace, or other destination points is to be investigated and addressed in subsequent phases of this study.

The *Ambos Nogales Civic Planning Vision* charrette process, conducted in 2009, as part of the Nogales General Plan Update 2010 focused on creating a vibrant mixed-use development in the urban core area surrounding both sides of the DeConcini POE. It recommended a pedestrian scale environment including some form of public transportation providing connectivity between the DeConcini POE and the Walmart retail area.

Public transportation could also be planned to provide service to the Mariposa Port of Entry sometime in the future. Pick-up/drop-off areas or park-and-ride facilities that may be provided to address current needs could ultimately serve as transit centers. While neither the City of Nogales nor Santa Cruz County has a public transit system, a number of local jitney services and intercity bus and van services operate within the study area. An inventory has been made of alternative modes of transportation.

Near all the ports of entry, the provision of pick-up/drop-off areas, park-and-ride lots, and transit staging areas to direct and consolidate taxi, bus and delivery services are needed. Park-and-ride lots and/or transit staging areas could evolve into service facilities for a future public transit service in the Nogales area. Additional public parking is needed for residents and visitors alike frequenting the many shopping areas, attractions, and entertainment sites in Nogales, and for those crossing the border from the Arizona side into Mexico for shopping and day trips.

The primary objectives for the *Nogales Pedestrian Circulation at Port of Entries Study* include:

1. Provide for convenient and safe pedestrian travel in downtown Nogales, and to and from the Nogales ports of entry.
2. Improve staging areas for vehicular transportation and transit services.
3. Enhance opportunities for multimodal accessibility for residents and visitors alike.
3. Identify multimodal connectivity between the Mariposa Port of Entry and major destination areas.
4. Set forth (bilingual) signage and wayfinding strategies to inform and direct pedestrians including identification and information on destinations, how to get there, and how long it will take.
5. Coordinate the plan with local needs, economic development, and downtown revitalization efforts.
6. Identify a menu of potential resources to implement the plan.



City of Nogales General Plan

These objectives of the PARA study continue to be relevant in 2020 and therefore should be incorporated as part of the Transportation, Circulation, Access and Mobility Element of the Policy Plan.

Unified Nogales/Santa Cruz County Transportation Plan 2010

The principal focus of this plan is to update the 2000 Transportation Plan. Significant population growth and economic development in Santa Cruz County and the City of Nogales area requires continuous comprehensive planning to address growing demands placed on the County and City's roads and streets. In addition, this growth and development calls for an examination of transit needs and opportunities.

The transportation plan identified improvements over five- and ten-year periods and supports long-range transportation needs incorporating both roadway and transit elements. The study area includes the corporate limits of Santa Cruz County and the City of Nogales and the neighboring unincorporated portions of Santa Cruz County. In addition, this plan identified the need for a specific pedestrian study in the downtown and ports of entry areas.

The *Unified Nogales/Santa Cruz County Transportation Plan 2010* began in 2008 and was completed in May of 2010. The study ran concurrently with the previous Nogales General Plan update process. The results of this plan build on the 2000 plan and were incorporated in map and policy form in the Transportation and Circulation Element included in the Policy Volume of the Nogales General Plan Update 2010.

Nogales General Plan 2010

Completed in 2010, the City of Nogales General Plan provided direction and information to the Unified Nogales/Santa Cruz County Transportation Plan 2010 and to the *Nogales PARA Pedestrian Circulation at Ports of Entry* study completed in 2012, as did the Ambos Nogales Civic Planning Vision charrette conducted as part of the 2010 Nogales General Plan update. The 2020 update of the general plan should build on efforts initiated in 2010 while adapting to emerging community needs. .

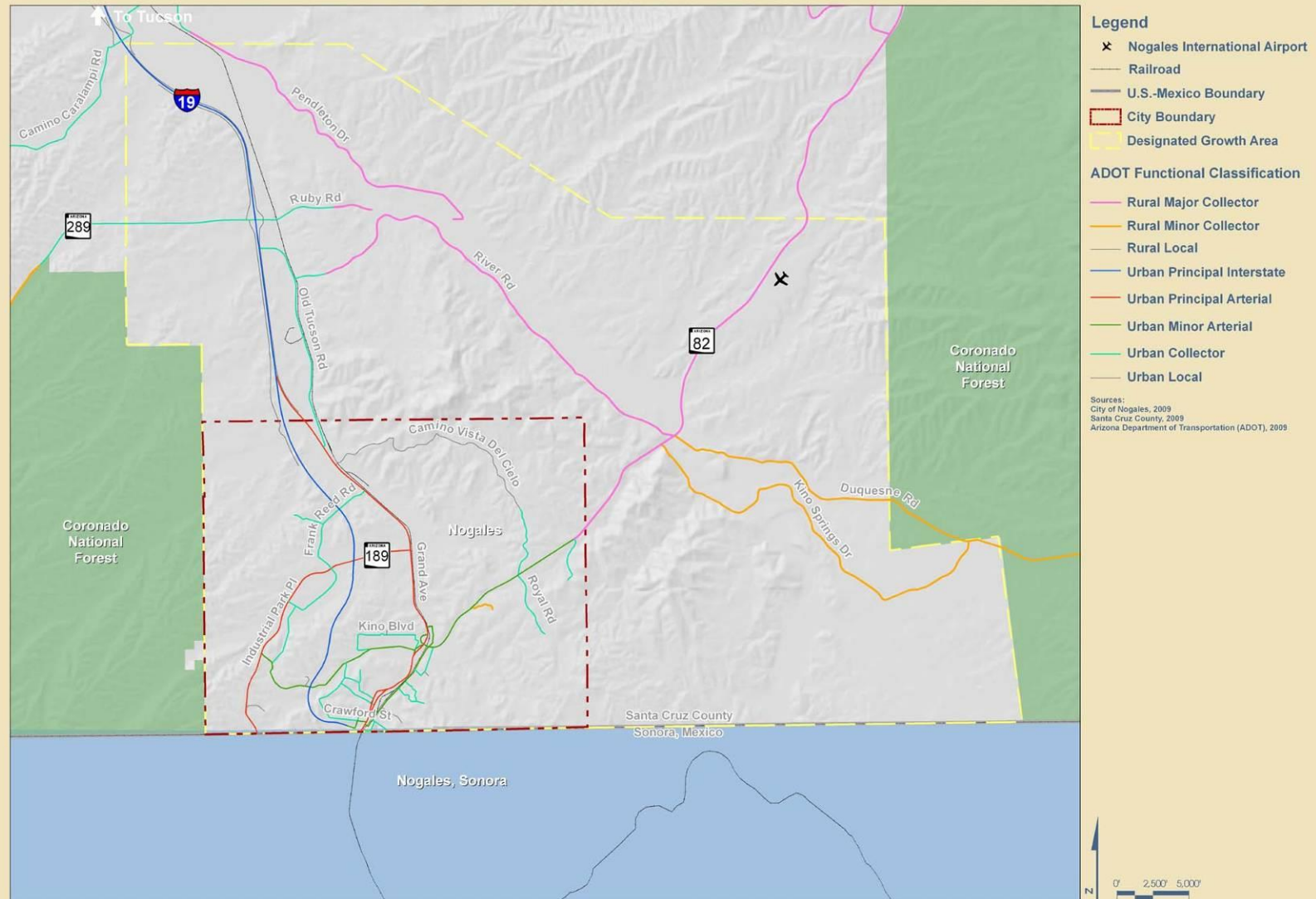


*Morley Avenue and Court Street Connectivity Concepts
Nogales General Plan Update 2010.*



City of Nogales General Plan

EXHIBIT 9: FUNCTIONALLY CLASSIFIED ROADWAYS





City of Nogales General Plan

International Port of Entry

The City of Nogales is an international gateway for the United States and Mexico. Department of Homeland Security operates a Service Port, the Dennis DeConcini Port of Entry (POE), on Grand Avenue. The U.S. Customs and Border Protection Service Port has a full range of cargo processing functions, including inspections, entry, collections and verification.

The Morley Gate pedestrian port of entry gets an estimated 3,000 pedestrians that cross daily. The pedestrian port is used extensively by the merchants of Ambos Nogales and brings a steady stream of shoppers to Morley Avenue businesses.

The Nogales International Airport is a general aviation airport located within the City. The airport serves as a port of entry into the United States; it is not served by any commercial airlines.

The Mariposa Port of Entry was built in the 1970s. Originally intended for commercial trucks, it was designed to handle as much as 400 truck per day. The Port's \$212 million upgrade included 12 additional lanes to the facility, more inbound and outbound lanes, new buildings, booths and canopies and more parking. The design included 12 lanes for private vehicles, seven lanes for commercial trucks, one lane for passenger buses and three pedestrian lines inside one of the six new buildings at the facility.

Nogales Port of Entry Traffic

The following tables are based on U.S. Port of Entry statistics reported by the Research and Innovative Technology Administration, Bureau of Transportation Statistics, U.S. Dept. of Transportation and provide totals by transportation mode entering the United States via Arizona POEs, including Nogales POEs from 2011 to 2018.

¹³ Note: The latest year reported for Sasabe was 2015.

Table 7
Total Annual Arizona Port of Entry Traffic
by Bus, Personal Vehicles, Trains, and Trucks
2018

Port of Entry	Buses	Personal Vehicles	Trains	Trucks
Douglas	2,501	1,727,192	0	27,804
Lukeville	532	411,228	0	298
Naco	22	310,106	0	2997
Nogales	9,569	3,603,601	737	337,179
San Luis	169	3,257,990	0	28,211
Sasabe ¹³	0	20,098	0	0
Totals	12,793	9,330,215	737	396,489

Source: U.S. Port of Entry Statistics, Research and Innovative Technology Administration, Bureau of Transportation Statistics, U.S. Dept. of Transportation

Buses

As shown on Table 7, of the total 12,793 buses entering via an Arizona POE, a total of 9,569 buses, or 75 percent, use Nogales as the port of entry.

Passenger Vehicles (POV)

As shown on Table 7, of the total 9,330,215 POVs entering via an Arizona POE between in 2018, a total of 3,603,601 POVs, or 39 percent, use Nogales as the POE; 3,257,990, or 35 percent, use San Luis and 1,727,192, or 18 percent, use Douglas, the remaining 8 percent enters via Lukeville, Naco or Sasabe.



City of Nogales General Plan

Trains

According to Table 7, Nogales is the only Arizona POE with binational train access. A total of 737 trains enter annually through the Nogales POE.

Commercial Trucks

As provided on Table 7, of the total 396,489 commercial trucks entering the United States via an Arizona POE, a total of 337,179 commercial trucks, or 85 percent, use Nogales as the port of entry.

Pedestrians and Personal Vehicle Passengers

Table 8 shows the total number of pedestrians and personal vehicle passengers entering the United State via an Arizona port of entry in 2018.

Table 8
Total Annual Arizona Port of Entry Traffic
Pedestrians and Personal Vehicle Passengers
2018

Port of Entry	Pedestrian	Personal Vehicles Passengers
Douglas	847,568	3,098,512
Lukeville	46,499	1,061,111
Naco	152,162	565,907
Nogales	3,422,816	7,153,600
San Luis	2,640,907	5,854,901
Sasabe ¹⁴	767	35,667
Totals	7,110,719	17,769,698

Source: U.S. Port of Entry Statistics, Research and Innovative Technology Administration, Bureau of Transportation Statistics, U.S. Dept. of Transportation

¹⁴ Note: The latest year reported for Sasabe was 2015.

Nogales Border Crossings All Modes

Table 9 shows border crossings statistics 2013 to 2018 for all modes of transportation entering the United State via a Nogales POE. This total includes all modes of transportation carrying passengers and pedestrians.

Table 9
Total Nogales Port of Entry Border Crossings
All Transportation Modes
2013-2018

Mode	2013	2014	2015	2016	2017	2018
Buses	8,699	9,423	9,694	10,077	10,171	9,569
Pedestrians	2,912,077	2,886,022	3,131,978	3,420,708	3,349,123	3,422,816
Personal Vehicle Passengers	6,510,096	6,798,080	7,190,065	7,060,684	7,630,386	7,153,600
Personal Vehicle	3,162,451	3,286,532	3,470,471	3,477,415	3,806,449	3,603,601
Trains	866	795	801	742	649	737
Trucks	311,669	312,010	319,747	335,737	333,941	337,179
Totals	12,905,858	13,292,862	14,122,756	14,305,363	15,130,719	14,527,502

Source: U.S. Port of Entry Statistics, Research and Innovative Technology Administration, Bureau of Transportation Statistics, U.S. Dept. of Transportation

As provided on Table 9, of the total border crossing using the Nogales Port of Entry increased from 2013 to 2017 and experience a decline in 2018 specifically as it relates to buses, personal vehicle passengers, and personal vehicle mode. Figure 1 depicts the 2013-2018 trend in graphic form.



City of Nogales General Plan

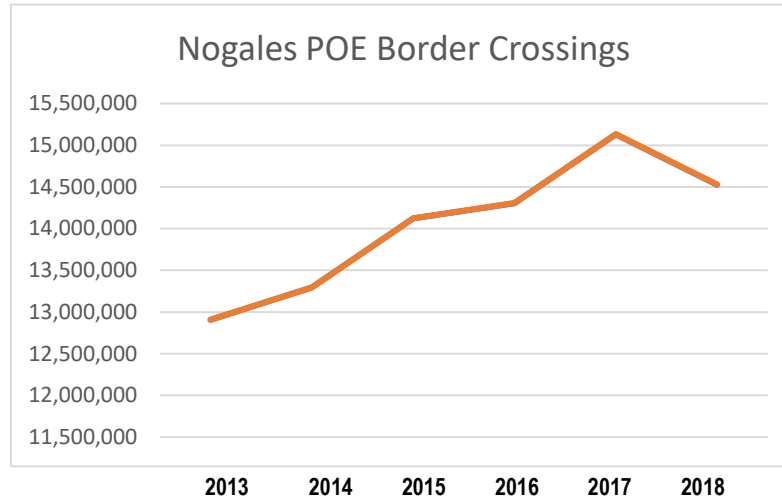


Figure 1: 2013-2018 Nogales POE Border Crossings

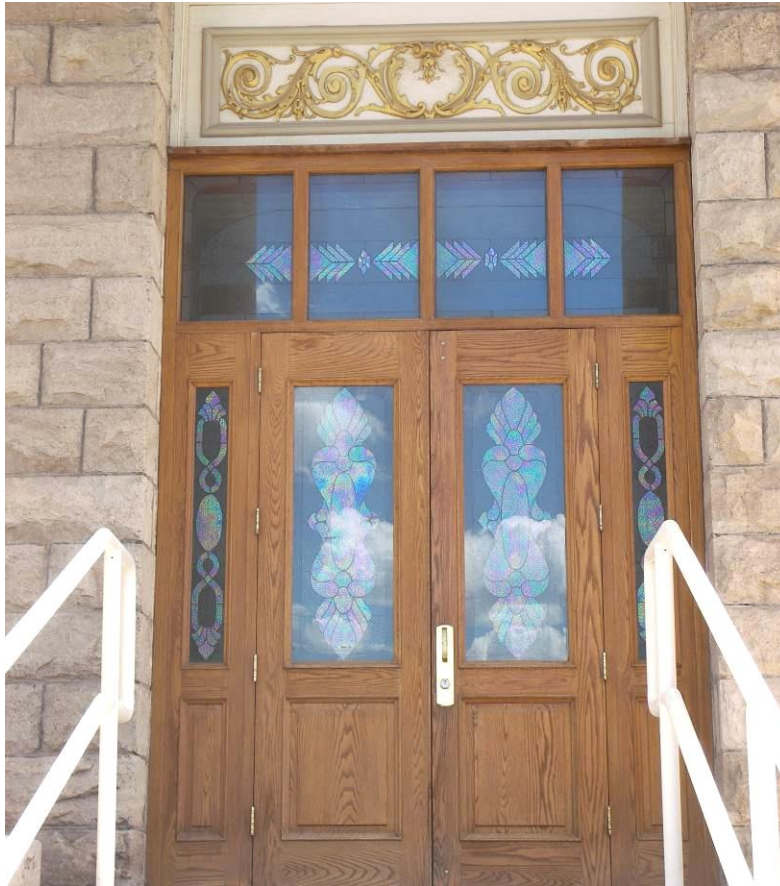
Port of Entry Statistics Summary

As provided in this chapter, Nogales showed the largest number of pedestrians entering the United States via an Arizona port of entry in 2018, making the City the largest recipient of pedestrian border crossings in the state of Arizona. The same was true for the following categories: commercial trucks, buses, POV and trains.





City of Nogales General Plan



Nogales Unified School District

The Nogales Unified School District serves 5,749 students in its 10 schools which include a preschool program, 6 elementary schools, 2 middle schools, and 2 high schools. Located in the southern part of Santa Cruz County, Nogales Unified School District students and families bring a rich cultural background that reflects life on both sides of the border.

School districts across Arizona face many of the same hurdles related to funding and teacher retention. In 2019, the Nogales Unified School District reported one of the state's highest graduation rates. It has a 98% graduation rate compared to the state average of 77%.

The Nogales Unified School District has developed a strong athletic program, particularly at the middle and high school levels, in sports such as football, soccer, basketball, volleyball, cheer and poms, and in track. Over the years, Nogales teams have captured both state and local titles in their respective sports, bringing attention to the athletic ability of our students and teams.

Nogales High School and Pierson Vocational High School received accreditation from the North Central Association Commission on Accreditation and School Improvement (NCA CASI). Through this process, they have each demonstrated that they have met the criteria to be labeled as a quality school.

The high school music program, particularly the marching band and mariachi as well as the orchestra, regularly demonstrate their talents at a variety of competitions held throughout the state. During these competitions, students have earned the very highest ratings and honors for their performances. The Nogales High School boasts a piano lab that is unique across the state.

The bands and orchestras at both Desert Shadows and Wade Carpenter Middle School have received outstanding honors and ratings at state competitions at which they participate annually.



City of Nogales General Plan

Other Schools Serving the Area

Lourdes Catholic School. The Lourdes Catholic School is a coed school offering grades Pre-K through 12. There were 308 students enrolled during the 2015-2016 school year. The student/teacher ratio for this school was 17.2 compared to the national average of 10.3 for private schools.

Sacred Heart Catholic School. The Sacred Heart Catholic School is a coed school offering grades Pre-K through 12. There were 274 students enrolled during the 2015-2016 school year. The student/teacher ratio for this school was 12.6 compared to the national average of 10.3 for private schools.

Sonshine Christian School. The Sonshine Christian School is a coed school offering grades Pre-K through 5. There were 107 students enrolled during the 2015-2016 school year. Of this total, approximately 57 students attended grades K-5. The student/teacher ratio for this school was 8.3 compared to the national average of 10.3 for private schools.

Little Red School House. This school offers grades K-8. There were 225 students enrolled during the 2015-2016 school year. The student/teacher ratio for this school was 17.31 compared to the national average of 15.96 for public schools.

Primeria Alta. This school offers grades 5-12. There were 43 students enrolled during the 2016-2017 school year. The student/teacher ratio for this school was 15.6.

Mexicayotl Charter School. This charter school offers grades K-8. There were 186 students enrolled during the 2015-2016 school year. The student/teacher ratio for this school is not provided.

Nogales Unified School District Statistics

Table 10 provided in the following page lists public schools within the Nogales Unified School District. This table also includes student enrollment and teacher student ratio for the 2015-2016 school year based on most current data provided by the National Center for Education Statistics at the time this document was prepared. There were a total of 5,749 enrolled students and a total of 281 teachers during the 2016-2017 school year. The average student/teacher ratio in the Nogales Unified School District is 20.46 students per teacher. The national teacher/student ratio is 15.96 students per teacher for public schools. Most of the schools within the Nogales Unified School District have slightly higher teacher/student ratios than the national average.

Exhibit 10 shows school districts and schools serving the City of Nogales Designated Growth Area.



City of Nogales General Plan

Table 10
Nogales Unified School District
Public School Data 2016-2017 School Year

School Name	Address	Grades	Number Enrolled	Student/Teacher Ratio
High Schools				
Nogales High School	1905 N. Apache Blvd. Nogales, AZ 85621 Office: (520) 377-2021 Fax: (520) 281-4448	9-12	1,799	23.06
Pierson Vocational High School	451 N. Arroyo Blvd. Nogales, AZ 85621 Office: (520) 287-0915 Fax: (520) 287-0918	9-12	124	15.50
Middle Schools				
Wade Carpenter Middle School	595 W. Kino St. Nogales, AZ 85621 Office: (520) 287-0820 Fax: (520) 287-0817	6-8	602	25.08
Desert Shadows Middle School	340 Blvd. Del Rey David Nogales, AZ 85621 Office: (520) 377-2646 Fax: (520) 377-2674	6-8	425	20.24
Elementary Schools				
Lincoln Elementary School	652 N. Tyler St. Nogales, AZ 85621 Office: (520) 287-0870 Fax: (520) 287-0875	PK-5	425	20.24
AJ Mitchell Elementary School	855 N. Bautista Dr. Nogales, AZ 85621 Office: (520) 287-0840 Fax: (520) 287-0847	KG-5	420	21.00

Source: National Center for Education Statistics, Nogales Unified School District 2015-2016 School Year Statistics.



City of Nogales General Plan

Table 10
Nogales Unified School District
Public Schools Data 2016-2017 School Year
(Continued)

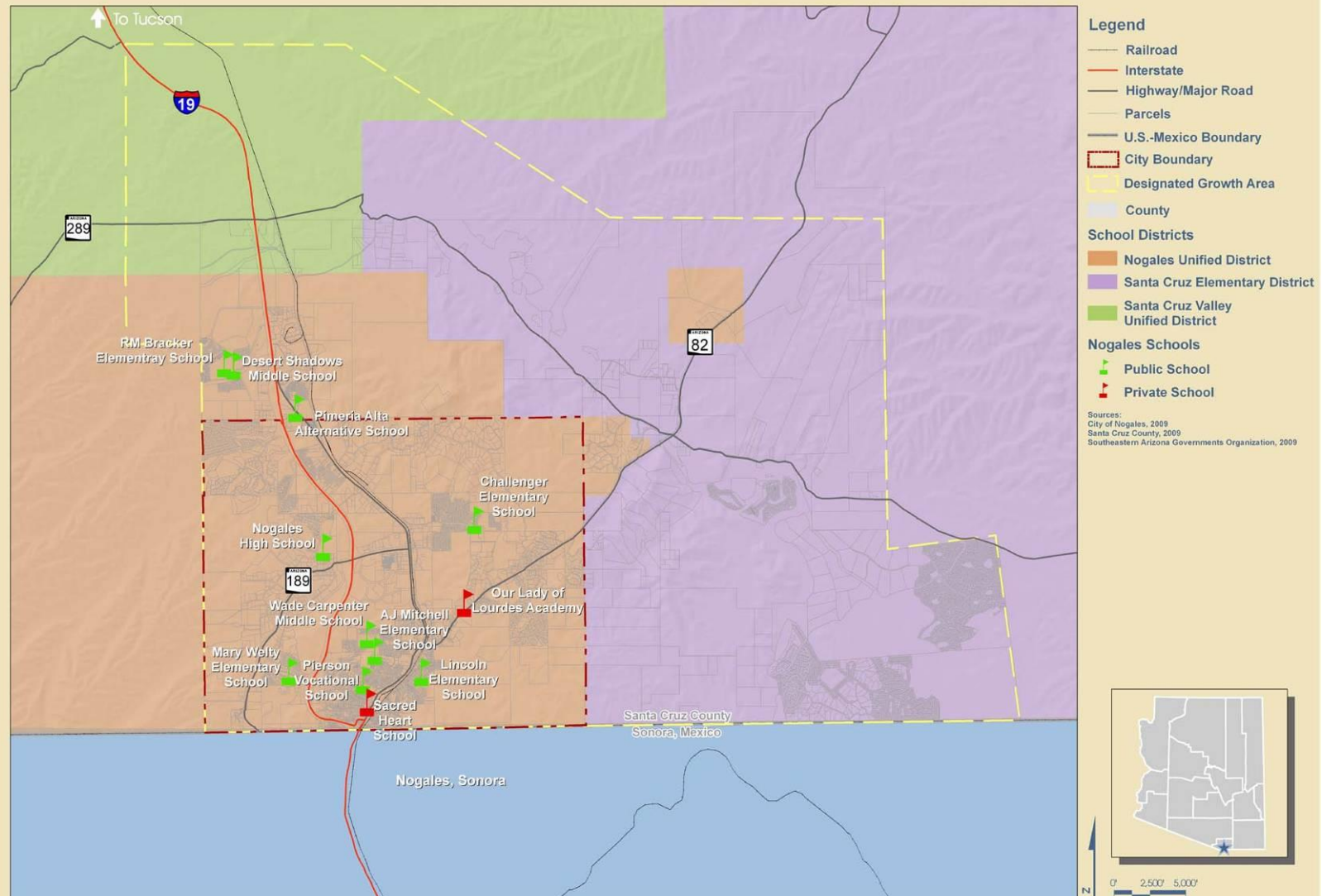
School Name	Address	Grades	Number Enrolled	Student/Teacher Ratio
Elementary Schools				
Mary L. Welty Elementary School	1050 W. Cimarron St. Nogales, AZ 85621 Office: (520) 287-0880 Fax: (520) 287-6955	KG-5	365	18.25
Challenger Elementary School	901 E. Calle Mayer Nogales, AZ 85621 Office: (520) 377-0544 Fax: (520) 377-2026	KG-5	576	20.57
Francisco Vasquez De Coronado Elementary School	2301 N. Al Harrison Drive Nogales, AZ 85621 Office: (520) 377-2855 Fax: (520) 377-0221	KG-5	577	19.89
Robert Bracker Elementary School	121 Camino Diez Mandamientos Nogales, AZ 85621 Office: (520) 377-2886 Fax: (520) 397-7251	KG-5	257	14.28

Source: National Center for Education Statistics, Nogales Unified School District 2015-2016 School Year Statistics.



City of Nogales General Plan

EXHIBIT 10: SCHOOL DISTRICTS AND SCHOOLS





City of Nogales General Plan

Higher Education & Workforce Training

Santa Cruz County Provisional Community College District

In May 2010, the citizens of Santa Cruz County founded its first institution of higher education, authorized by the state of Arizona as the Provisional Community College District (SCCPCCD). Through their collective vision, voters brought affordable and accessible higher education to all. Located in the City of Nogales, SCCPCD supports more than 300 students.

Through partnerships with, University of Arizona Nogales and the Santa Cruz County School Superintendent's Office, SCCPCD offers courses leading to a variety of associate's, bachelor's and master's degree, and certificate programs. The District also strives to meet local business and industry needs and provides workforce training, adult basic education, continuing education, and professional development courses.

University of Arizona & Pima Community College

The University of Arizona Nogales offers a student-centered learning environment focused on its students' individual success. The University of Arizona Nogales extends the University's educational mission by providing affordable, accessible opportunities to earn high-quality and meaningful University of Arizona degrees.

In partnership with Pima Community College UA Nogales offers bachelor degrees that are high quality and geographically accessible. In addition to traditional degree programs in education, humanities, and the social sciences, the University of Arizona Nogales campus offers Bachelor of Applied Science programs.

Connected with the needs of industry and education in Santa Cruz County, UA Nogales offers tailored programs to serve the local community and working students of all ages.

By expanding knowledge and skillset to achieve a career that directly impacts the community, students join the ranks of other Wildcats across the State of Arizona who are successfully flourishing in their chosen career.



Santa Cruz County Community Provisional College District



City of Nogales General Plan

Infrastructure & Public Services

Nogales International Wastewater Treatment Plant



Within the cross-border neighboring cities of Nogales, Arizona, and Nogales, Sonora, or Ambos Nogales, wastewater from both countries is treated at the Nogales International Wastewater Treatment Plant (NIWWTP). Located in Rio Rico, Arizona, the NIWWTP discharges treated effluent to the Santa Cruz River. The Office of Border Environmental Protection (OBEP) currently provides material and technical support to the wastewater utility in Nogales, Sonora, for the purpose of improving the quality of wastewater discharges originating in Mexico. This helps protect investments in infrastructure and water resources in both countries.

Since its conception in 1943, the NIWWTP has approached the treatment and disposal of wastewater as a regional issue. The NIWWTP provides service to Nogales, Arizona, Nogales, Sonora, and the surrounding areas of Santa Cruz County, Arizona. The original plant was designed to support a population of 20,000.

Through the decades, the plant was upgraded, enlarged and enhanced in response to population and flows. Today, the population served exceeds 350,000. The plant is currently located at 865 Rio Rico Industrial Park in Rio Rico, AZ 85648.

To address the regional demands for wastewater treatment, a work group comprised of representatives from the U. S. International Boundary and Water Commission (USIBWC), the U.S. Environmental Protection Agency, Region 9, the Border Environment Cooperation Commission (BECC), The Arizona Department of Environmental Quality (ADEQ), the University of Arizona (UofA), the North American Development Bank, and the City of Nogales meet regularly.

Regulations applicable to the plant require that the effluent quality be greatly enhanced, prompting a change in treatment process. The City decided to construct the project under a Design-Build delivery method.

In September 2005, Camp Dresser and McKee Inc. (CDM) completed the *Evaluation of Alternatives for Upgrading the Nogales International Wastewater Treatment Plant (NIWWTP)* for the City of Nogales. Six treatment alternatives were evaluated as part of this study. The Nogales Technical Committee (NTC) identified Alternative 2 – New MLE as the preferred alternative, and directed CDM to identify, if possible, potential reductions to the cost estimates for this alternative, while providing a plant capable of meeting all regulations at a design flow of 14-MGD. Areas for potential cost reductions were identified and evaluated.



City of Nogales General Plan

A technology upgrade of the NIWTP was completed in August of 2009. This upgrade consisted of adding equipment and apparatus to upgrade the technology of the NIWTP to a Biological Nutrient Removal (BNR) system using the Modified Ludzack-Ettinger process. This process allows for the removal of Nitrogen compounds in the discharged effluent which had been shown to be detrimental to the fish & wildlife along the Santa Cruz River. The technology upgrade cost approximately \$64 million dollars and was funded largely by a grant from the Environmental Protection Agency (EPA) thru the Border Environment Infrastructure Fund (BEIF).

The project is staffed by seventeen persons, including administrative support and is Operated and Maintained by the United States Section of the International Boundary & Water Commission. Total yearly operation and maintenance cost is about \$4.5 million dollars. Mexico, the City of Nogales, Arizona, and the U. S. Congress fund the project based upon flow contributions to facility from each country. In addition to responding to federal and state permits, the NIWTP provides river-based habitat for approximately ten downstream miles as well as replenishment of the aquifers serving Santa Cruz and Pima County communities.

Nogales Wash Sanitary Sewer Overflows

According to the Arizona Department of Environmental Quality (ADEQ) Office of Border Environmental Protection (OBEP), the U.S. and Mexican cities that make up Nogales, Arizona and Nogales, Sonora (Ambos Nogales) are located 65 miles south of Tucson in the upper Santa Cruz River watershed. Nogales, Arizona is an example of a U.S. border city that hosts infrastructure shared with a neighboring country. A bi-national agreement known as Minute 276 allows Mexico to deliver up to 9.9 million gallons (mgd) of its wastewater per day to the Nogales International Wastewater Treatment Plant (NIWTP) in Rio Rico, Arizona. An additional 4.75 mgd of plant capacity is allocated to communities in Arizona.

The International Outfall Interceptor (IOI) is the main vehicle that transfers this bi-national sewage to the NIWTP in Rio Rico. The plant has both an Aquifer Protection Permit (APP) and an Arizona Pollution Discharge Elimination System (AZPDES) permit for discharge of treated bi-national effluent to the Santa Cruz River.

The Nogales Wash is the main drainage avenue for the Ambos Nogales watershed. During heavy rain, surface runoff may bring sand, oil, grease, and/or garbage into the wastewater infrastructure of Nogales, Sonora. These obstructions cause sanitary-sewer overflows (SSO's) that may create sewage problems in Nogales Wash, which flows north into Arizona.

OBEP notes these events and makes recommendations at Nogales Bi-national Technical Committee (BTC) meetings. Concerns are also raised through informal meetings with the Nogales, Sonora Water and Wastewater Utility (OOMAPAS-NS). Communication leads to rapid bypass of sewage to the International Outfall Interceptor (IOI), which is the pipe that carries wastewater from Ambos Nogales to the Nogales International Wastewater Treatment Plant when SSO's take place.

In response to SSO's and when need arises and funding is available, water quality samples are analyzed at a state-certified laboratory. Data is then shared at bi-national venues such as Nogales Bi-national Technical Committee meetings to find long-term strategies for SSO solutions in Nogales, Sonora.

In support of ongoing pollution prevention, OBEP worked with ADEQ's Water Quality Division and EPA's Border 2020 Program to host a Stormwater Workshop in the border region. The workshop summarized stormwater regulations and best-management practices for preventing non-point source pollution resulting from monsoon rains along the border. Federal, state and municipal representatives from Sonora attended the workshop. They received translated information to consider within Mexico's environmental policies pertaining to bi-national watersheds.



City of Nogales General Plan

Arizona Water Quality in a Bi-national Context

Nogales, Sonora is home to a vibrant industrial and manufacturing sector. It hosts ten times the population of Nogales, Arizona. Although Sonora shares storm and wastewater infrastructure with Arizona, it adheres to different regulatory standards for stormwater management, industrial discharge, and operation and maintenance of wastewater-conveyance infrastructure.

Rapid population growth in Nogales, Sonora, has contributed Mexican wastewater discharges above treaty limits by up to three mgd. Although Sonoran wastewater is important in maintaining the flow of the Santa Cruz River, constant excesses may impact the operational efficiency of the NIWTP and the water quality of the downstream environment. In response, the U.S. Environmental Protection Agency (EPA) has supported construction of the Los Alisos Wastewater Treatment Plant (LAWTP) south of the watershed divide in Mexico. Wastewater diverted to the LAWTP protects the operational efficiency of the NIWTP, but comes at the cost of pumping wastewater uphill over an elevation change of 340 feet. LAWTP diversions may shorten the perennial segment of the Santa Cruz River. The river hosts rare aquatic and cottonwood-willow habitat, supports groundwater recharge, and sustains real-estate values in Arizona.

The U.S. International Boundary and Water Commission (IBWC) is responsible for working with its sister agency in Mexico (CILA) on water-quality and quantity issues in bi-national watersheds. This presents unique regulatory and environmental challenges for Arizona. In response, ADEQ coordinates with Arizona's Department of Water Resources, EPA's U.S.-Mexico Border 2020 Environmental Program, the Arizona-Mexico Commission, public utilities, professional organizations and non-profits on activities that yield positive environmental metrics for the border region.

ADEQ continues their involvement with the Nogales, Sonora, wastewater and water projects. The focus has been on questions of engineering controls for wastewater spillage during construction, specification of materials resistant to destructive wastewater environments and workplace safety.

Effluent

According to the Arizona Department of Water Resources (ADWR) 2018 reports, the Santa Cruz relies heavily on treated effluent from the Nogales International Wastewater Treatment Plant, or NIWTP, near Rio Rico. Co-owned by the U.S. Boundary and Water Commission and the City of Nogales, Arizona, the plant is designed to treat nearly 15 million gallons of water daily, which accounts for about 38 percent of the Santa Cruz flow at that point.

Roughly 10 million gallons of that daily capacity are allocated to Nogales, Sonora, a much larger community (pop. 212,500) than Nogales, Arizona (pop. 20,000). On the U.S. side, Nogales and Rio Rico are allocated 4.84 million gallons of capacity. Annually, Nogales, Arizona, uses just 12 percent of the IOI system providing the as-yet untreated sewage to the plant, while the vast majority of the rest flows north across the border from Sonora.

Water Supply and Water Quality

The Nogales Water Department delivers the highest quality water that meets or exceeds all federal and state requirements to every customer at fair and reasonable rates and remains vigilant in meeting the challenges of protecting the water source and environment that supports Nogales quality of life and the community's future. The current water plant capacity is anticipated to serve the current and projected population.



City of Nogales General Plan

As per 2018 *Consumer Confidence Report* on water quality, and based on the information currently available on the hydrogeologic setting and the adjacent land uses that are in the specified proximity of the drinking water source(s) of this public water system, the Arizona Department of Environmental Quality (ADEQ) has given a high risk designation for the degree to which this public water system drinking water source(s) are protected. A designation of high risk indicates there may be additional source water protection measures which can be implemented on the local level. This does not imply that the source water is contaminated, nor does it mean that contamination is imminent. Rather, it simply states that land use activities or hydrogeologic conditions exist that make the source water susceptible to possible future contamination.

The sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells are continuously monitored to ensure the highest water and environmental quality.

Currently, the City of Nogales water service area ends at the City's current municipal boundary. Valley Verde Company, a private water service provider, provides water to those areas within the City of Nogales Designated Growth Area adjacent to the City's northern boundary.

Police, Fire and Emergency Management Services

City of Nogales Police Department

The Nogales Police Department continually to improve the quality of life within the City and serves far more than the actual residents who live within the city limits as thousands of tourists and commercial traffic can pass through the city on any given day. This is one aspect that makes Nogales unique. The Nogales Police Department, currently has 20 miles of coverage and counts with 55 officers to support the wide variety of services available through the Nogales Police Department. In addition to regular officers, the Nogales Police Department has canine units available, along

with motorcycle patrol, SWAT officers, a narcotics unit, a criminal investigation unit, a Community Action Team (CAT), and School Resource Officers. The Nogales Police Department has continuous training for its officers and civilian personnel. In addition, the Nogales Police Department has established a Citizens Police Academy to train local residents to aid and assist the Nogales Police Department as well as to inform the community about the many services provided. The Nogales Police Department is well equipped to sustain growth.

City of Nogales Fire Department

The Nogales Fire and Medical Department serves a population of approximately 20,000 people covering an area of 21 square miles. The department responds to an estimated 3,000 calls for services each year from two fire stations. The organization operates under an "all hazards" model and provides fire protection, emergency medical services, community risk reduction, hazardous materials and technical rescue response to the citizens of Nogales and its visitors.

The average response time for the City of Nogales Fire is 5 minutes. With well-trained and certified firefighters, state-of-the-art firefighting equipment and excellent training programs, the City of Nogales Fire Department has provided fire services since 1984 and is one of the best in Arizona. Due to proximity, the City of Nogales Fire Department already responds to 911 calls related to fire emergencies within Santa Cruz County. The Nogales Police Department is well equipped to support growth.

Emergency Management Services (EMS)

The EMS Division operates 3 ambulances staffed with professional personnel prepared to respond to nearly any medical emergency 24 hours a day, 365 days a year to over 2,800 call per year. The City of Nogales Fire and Medical Department has provided EMS services since 1984.



City of Nogales General Plan

Nogales Library

Nogales-Rochlin Public Library

The Nogales-Rochlin Public Library serves a community of over 25,000 residents with Internet computer access, 56,000 volumes, and dozens of newspapers and magazines. There is a weekly Storytime, homework help, special after-school programs for children.

The Nogales-Santa Cruz County Public Library fosters an environment in which minds can grow; promotes literacy and an active, informed citizenry; and supports formal and informal education. The Library provides access through its collection and participation in an evolving network of libraries to the informational, educational and cultural records of the society.

The Library serves all members of the community regardless of economic standing, age or language. The Nogales-Santa Cruz County Public Library in fulfilling its mission acts as a support center for students to meet educational objectives, a popular material center to provide the library users with current, high-interest materials, a reference center with accurate, timely information and gateway to reading for children and parents.

Electricity and Natural Gas

UniSource Energy Service

UniSource Energy Service (UES), located in Nogales, Arizona, is a utility company that provides public services for Nogales residents. UES has proposed upgrading and building new transmission and substation facilities that will help to improve electric reliability for customers.

The Nogales Tap to Kantor Upgrade is being planned in collaboration with the Nogales Interconnection Project. The projects will support the reliability of the electric system by providing bi-directional power flow and voltage support, and emergency assistance for the electric system both north and south of the U.S.-Mexico border.

The proposed project includes upgrading a 27.5-mile segment of UES' existing 138-kilovolt (kV) transmission line that serves customers in Santa Cruz County and building a new substation west of Nogales.

The Nogales Interconnection Project is a proposed direct current interconnection (commonly known as a DC Tie) and associated electric facilities, which will allow for an asynchronous interconnection between the electric grid in southern Arizona and the electric grid in the northwest region of Mexico.

Propane Services

ServiGas supplies propane to both businesses and homeowners in Nogales, Arizona.

Internet Service Providers

CenturyLink, Mediacom, and Viasat are the primary internet service providers for residences and businesses in Nogales, Arizona. Xfinity Mobile, AT&T, Sprint and T-Mobile are the primary mobile phone service providers in the City.



City of Nogales General Plan

Demographics

This section presents the demographics of the Ambos Nogales area, including degree of urbanization, population growth (past, present, and future), and population density. The Mexican population has consistently exceeded the U.S. population in Ambos Nogales by an order of magnitude. This trend is expected to continue for the foreseeable future.

Demographic Comparisons

As shown in Table 11, the 2017 population estimate for Nogales, Arizona, was 20,233, representing a decrease of 604 people from the 20,837 population counted by the US Census Bureau 2010 counts and a decrease of 645 people from the 20,878 population counted by the US Census Bureau 2000 counts.

The population reported by the US Census count in 1980 was 15,683. Together, these figures represent a period of growth from 1980 to 2000 followed by a slight decline in population from 2000 to 2010. The slight decline reflected in the 2010 population may be a result of people not participating in the Census survey. Since estimates are derived based on counts, estimates will show the same trend. The City is proactively encouraging its constituents to participate in the 2020 decennial census.

Table 11
Demographic Comparisons

Place	1990	2000	2010	2017
Nogales, Arizona	19,489	20,878	20,837	20,233
Santa Cruz County	29,676	38,381	47,420	46,358
Arizona	3,665,228	5,130,632	6,392,017	6,809,946
Nogales, Sonora	105,873	156,854	212,533	N/A

Source: U.S. Census Bureau 1990, 2000 and 2010 Counts and 2013-2017 American Community Survey 5-Year Estimates, 2017

About 82 percent of the resident population of Santa Cruz County is classified as “Minority” (other than White). Persons of “Hispanic or Latino” ethnicity comprise more than 98 percent of the minority population. In comparison, more than 94 percent of the resident population of Nogales, Arizona, is classified as “Minority” with 99 percent comprising the category of “Hispanic or Latino” ethnicity (U.S. Census Bureau, Census 2000 Redistricting Summary File).

The entire population of Nogales, Arizona is classified as urban. The entire population of and Nogales, Sonora, México reside on the slopes of the narrow Nogales Wash valley that extends from south to north, as well as in the southern portion of the city. The entirety of the population of Nogales, Sonora is classified as urban by the Mexican Census, although many neighborhoods — and specially those in the urban fringe — lack basic urban services, such as paved roads, potable water, and adequate housing stock (Declet 2006).

According to the Mexican Census Nogales, Sonora, had a population of 156,854 2000. This represents a growth rate of approximately 50 percent since 1990. The same source reported a 193,517 (INEGI 2005). The Mexican Census reported a population of 212,533 for Nogales, Sonora, in 2010. Due to the potential for census undercounts on both sides of the border, the resident populations of Ambos Nogales could be higher than documented.

Río Rico is an unincorporated community in Santa Cruz County that is located 12 miles north of the U.S.-México border and 57 miles south of Tucson. It is made up of 39,000 acres on the foothills of the Santa Rita Mountains and has an elevation of 3,418 feet above sea level. Río Rico was part of the Baca Float, a 100,000-acre U.S. Congress grant to the descendants of Luis María Baca honoring an earlier Spanish government grant (Arizona Department of Commerce 2007). The community began in 1969.



City of Nogales General Plan

Population Projections

Table 12 includes the population projections.

Table 12
Population Projections for the City of Nogales and other Incorporated and Unincorporated Areas in Santa Cruz County
2020 - 2050

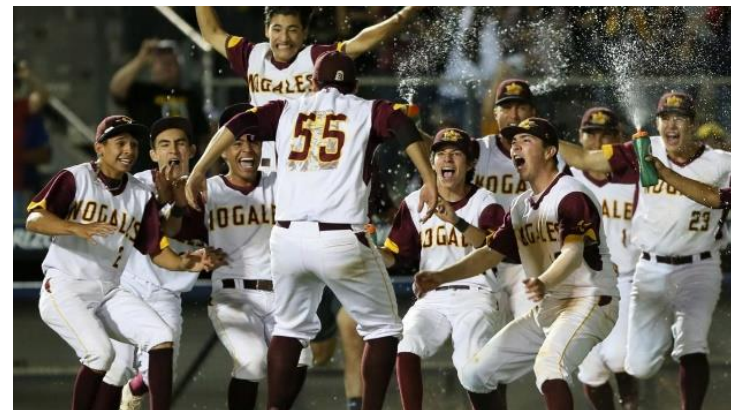
Place	2010	2020	2030	2040	2050
Incorporated Places					
City of Nogales	20,837	23,275	25,692	27,425	28,436
Patagonia	913	1,018	1,125	1,200	1,244
Unincorporated Balance of County	25,670	29,450	32,417	34,540	35,771
Census Designated Places					
Rio Rico CDP	18,962	21,754	23,947	25,514	26,424
Sonoita CDP	818	939	1,033	1,101	1,140
Tubac CDP	1,191	1,366	1,504	1,603	1,659
Santa Cruz County	47,420	53,742	59,234	63,166	65,451

Source: Arizona Department of Economic Security, Research Administration, Population Statistic Unit, Population Projections for 2019 and Beyond.¹⁵

Median Age and Median Family Income

The 2010 Census reports a median age of 34 years for that year. The 2013-2017 American Community Survey 5-Year estimates reports a median age of 33.7 years in 2017. The 2010 U.S. Census reports a median family income of \$32,760 for that year. The U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates reports a median family income of \$33,452 in 2017.

¹⁵ **Note:** Arizona Department of Economic Security Population Projections are the most recent available projections approved by the State. These projections incorporate U.S. Bureau of the Census, 1990, 2000 and 2010 decennial counts.



With a large and active young population, and one of the best School Districts in Arizona, the City of Nogales is well positioned to support a strong and skilled workforce.



City of Nogales General Plan



Housing Characteristics

This chapter provides a brief assessment of housing characteristics, including a brief summary of historic housing within the City of Nogales.

Nogales Historic Residential Districts

The National Trust for Historic Preservation defines a local historic district as "an entire area or group of historic structures deemed significant to the city's cultural fabric that are protected by public review. This can include downtown commercial areas, main streets, waterfront districts, and residential districts."¹⁶ Nogales historic residential districts include:

The Crawford Hill Historic Residential District - Roughly bounded by Oak St., Terrace Ave., Compound St., and Interstate 19 and Grindell Ave. The Nogales Crawford Hill Historic Residential District was built on the slopes west of the arroyo dividing Nogales. It became the most substantial residential district in the city and has representative buildings from all periods of Nogales' history. The district includes 216 buildings. The district was listed in the National Register of Historic Places on August 29, 1985, reference: #85001874.

The Marsh Heights Historic District - Roughly Bounded by Court Street, Summit Avenue, South Court Street, and Morley Avenue. The Marsh Heights Historic District was developed by prominent Nogales businessman and land developer, George F. Marsh. It was platted in 1905 and developed in 1909. The neighborhood is organized around a hilltop central square. The district was listed in the National Register of Historic Places on October 29, 1985, reference: #85003407.

The Pennington Rural Historic Landscape - Located at Junction of Royal Road and Calle del Rio Nogales. This National Register District conveys a pristine sense of Anglo-American pioneer agriculture and represents a cohesive rural historic landscape in southern Arizona after the acquisition of the area from Mexico. It includes a stone cabin, a field, an irrigation ditch, and an adobe ruin. The stone cabin is thought to be the oldest remaining house built by Anglo-Americans in Arizona. The field has been farmed almost continuously since 1858. The field is thought to have been irrigated by diverting the water from the Santa Cruz River into the ditch, which is no longer there. The adobe ruin is thought to mark the former house of Albert Case Benedict, who was the third owner of the Pennington property. The property is associated with Elias Green Pennington, who was one of the first farmers along the upper Santa Cruz River, and his daughter, Larcena. The area was listed in the National Register of Historic Places on February 10, 2000, reference: #00000004.

¹⁶ Rocchi, Julia, *10 Steps to Establish a Local Historic District*, National Trust for Historic Preservation, 2016



City of Nogales General Plan



Crawford Hill Historic Residential District

Nogales Historic Houses

The City of Nogales includes numerous historic houses listed in the National Register of Historic Places. The houses in Nogales of historical significance which are listed in the National Register of Historic Places include:

10 Cottages on Short Street - built in 1900 and located on Short Street. These 10 concrete cottages were built as modest worker's housing early in the twentieth century. They are significant to the Nogales area because they are the only examples of cast-in-place concrete construction in the residential sector. Listed in the National Register of Historic Places on August 29, 1985, reference: #85001873.

George Dunbar House - built in 1918 and located at 605 Sierra Street. This was the residence of the first developer in Nogales, George Dunbar, who arrived in 1914, from California, and who is responsible for much of the twentieth century residential character of Nogales, Arizona, and Nogales, Sonora. His Nogales projects included the Ellis Tract, the Smelter Tract, the Silver Bell Addition, Dunbar Bungalow Court, and the Mountain View Addition. Listed in the National Register of Historic Places on August 29, 1985, reference: #85001853.

W.G. Bowman House - built in 1918 and located at 613 Sierra Street. The W. G. Bowman House was built for one of Nogales' most influential and prolific real estate holders and businessmen during the height of his local career. Wirt G. Bowman was also a prominent state and national political figure. Listed in the National Register of Historic Places on August 29, 1985, reference: #85001850.

Frank F. Cranz House - built in 1900 and located at 321 Arroyo Street. It is the largest Queen Anne style-influenced residence in Nogales, the Frank F. Cranz House was built for the prominent mining man and Mayor of Nogales (1904-1906). Listed in the National Register of Historic Places on August 29, 1985, reference: #85001849.

Mediterranean Style House - built in 1900 and located at 215 Walnut Street. This house is the best local example of a Mediterranean style single-family residence in Nogales. Listed in the National Register of Historic Places on August 29, 1985, reference: #85001863.

Mediterranean Style House - built in 1900 and located at 245 Walnut Street. This brick house with a rusticated stucco exterior exhibits a unique local interpretation of the Mediterranean style. Listed in the National Register of Historic Places on August 29, 1985, reference: #85001862.

House at 365 Walnut Street - built in 1909 and located at 365 Walnut Street. Listed in the National Register of Historic Places on August 29, 1985, reference: #85001856.



City of Nogales General Plan

House at 459-465 Walnut Street - built in 1900 and located at 459-465 Walnut Street. It is the best local example of cast-in-place concrete residential construction. Classical pilasters and cantons and a flat roofed portico supported by two classic square columns are other notable features of this residence. Listed in the National Register of Historic Places on August 29, 1985, reference: #85001857.

Three Mediterranean Cottages on Pajarito Street - built in 1920 and located at 141 and 147 Pajarito Street and 533 Potrero Street. This project is the best example of Mediterranean style cottages in Nogales. The buildings are symbolic of population growth in Nogales during the post-World War I years. Listed in the National Register of Historic Places on February 10, 2000, reference: #00000004.

Hugo Miller House - built in 1912 and located at N. 565 Potrero Street. This Craftsman Bungalow is the best residential example of concrete brick construction in Nogales. It was the home of Hugo Miller, a prominent Nogales assayer who worked in many of the large mining districts of New Mexico and Nevada before moving to Nogales in 1912. Listed in the National Register of Historic Places on August 29, 1985, reference: #85001864.

House at 565 Morley Avenue - built in 1915 and located at 565 N Morley Avenue. This building features unique characteristics of the High Victorian Italianate (use of stilted segmented arch with vertical continuation of architectrave moulding; pedimental forms at dormers that are unrelated to anything in the façade below) and Neo-colonial Revival (strict attention to symmetry and use of hipped roof) architectural styles. Listed in the National Register of Historic Places on August 29, 1985, reference: #85001858.

The Senator James A. Harrison House - built in 1915 and located at 446 N Morley Avenue. The best-preserved two-story bungalow in Nogales, this house was built for prominent Nogales politician and businessman, Senator James A. Harrison. The current use of the house is a commercial beauty saloon and school. Its additions are incompatible with the original structure. Listed in the National Register of Historic Places on August 29, 1985, reference: #85001854.



W.G. Bowman House, Nogales Arizona



City of Nogales General Plan

Housing Characteristics

This chapter provides a brief assessment of housing occupancy status, housing tenure, housing vacancy, and household characteristics relevant to the preparation of the City of Nogales General Plan update based on U.S. Census Bureau 2000 and 2010 census counts.

Housing Occupancy Status

As provided on Table 13, the housing vacancy rate within the City of Nogales for the years 2000 and 2010, respectively 8 percent and 9 percent, is low when compared to the 14.3 vacancy rate in Santa Cruz County in 2010, the 16.3 vacancy rate in Arizona in 2010. A low vacancy rate is a great indicator that the residential real estate market performance in Nogales is good. It is also an indication that a strong demand for housing units exists.

Table 13
Housing Occupancy Status

Occupancy Status	2000	Percent	2010	Percent
Occupied Housing Units	5,985	92	6,601	91
Vacant Housing Units	516	8	659	9
Total Housing Units	6,501	100	7,260	100

Source: U.S. Census Bureau, Census 2000 Summary File and Census 2010 Summary File.

Housing Tenure

As provided on Table 14, of the total 5,985 occupied housing units within the City of Nogales in 2000, a total of 3,429 units, or 57 percent were owner-occupied households and a total of 2,556 units, or 43 percent, were renter-occupied households

Of the total 6,601 occupied housing units within the City of Nogales in 2010, a total of 3,371 units, or 51 percent, were owners-occupied and a total of 3,230 units, or 49 percent, were renter-occupied.

When compared to 2010 Santa Cruz County owner-occupied 67.6 percent, 2010 Arizona owner-occupied 66.1 percent, and 2010 national owner-occupied 65.1 percent rate, Nogales could improve its rate of owner-occupied housing by further incentivizing house-ownership programs.

Nogales 2010 owner-occupied rate is comparable to Tucson 2010 owner-occupied rate of 51.9 percent.

Arizona Towns of comparable population size such as Sahuarita and Marana respectively reported an 84 percent and 80.8 percent owner-occupied rate in 2010.

Table 14
Housing Tenure

Occupancy Status	2000	Percent	2010	Percent
Owner-occupied	3,429	57	3,371	51
Renter-occupied	2,556	43	3,230	49
Occupied Housing Units	5,985	100	6,601	100

Source: U.S. Census Bureau, Census 2000 Summary File and Census 2010 Summary File.



City of Nogales General Plan

Housing Vacancy Rate

Table 15 shows the vacancy status for vacant housing units in Nogales. According to the Census Bureau, the homeowner vacancy rate is the proportion of the homeowner inventory that is vacant "for sale." It is computed by dividing the total number of vacant units "for sale only" by the sum of owner-occupied units, vacant units that are "for sale only," and vacant units that have been sold but not yet occupied; and then multiplying by 100.

The rental vacancy rate is the proportion of the rental inventory that is vacant "for rent." It is computed by dividing the total number of vacant units "for rent" by the sum of the renter-occupied units, vacant units that are "for rent," and vacant units that have been rented but not yet occupied; and then multiplying by 100.

Table 15
Housing Vacancy Status

Vacancy Status	2000	Percent	2010	Percent
For rent	209	40.5	341	52
For sale only	66	12.8	47	7
Rented or sold, not occupied	44	8.5	22	3
For seasonal, recreational, or accessional use	57	11.0	42	6
For migrant workers	2	0.4	2	1
Other vacant	138	26.7	205	31
Vacant Housing Units	516	100.0	659	100

Source: U.S. Census Bureau, Census 2000 Summary File and Census 2010 Summary File.

Hispanic or Latino Householder

Table 16 shows the number of Hispanic or Latino Householders living the City of Nogales in occupied housing units. According to the Census Bureau, this category is composed of people whose origins are from the Dominican Republic, Spain, and Spanish-speaking Central or South American countries. It also includes general origin responses such as "Latino" or "Hispanic."

As shown in Table 16, a total of 5,431, or 91 percent, of the households within the City of Nogales encompassed Hispanic or Latino households and a total of 554, or 9 percent were not Hispanic or Latino households in 2000. Of the total 554 not Hispanic or Latino households, 492, or 8 percent were white households in 2000.

As provided on Table 16, Hispanic or Latino Households show and increase in 2010. It is anticipated that such trend will continue.

Table 16
Hispanic or Latino Householder

Householder Characteristics	2000	Percent	2010	Percent
Hispanic or Latino (of any race)	5,431	91	6,113	93
Not Hispanic or Latino	554	9	488	7
White alone	492	8	403	6
Occupied Housing Units	5,985	100	6,601	100

Source: U.S. Census Bureau, Census 2000 Summary File and Census 2010 Summary File.

According to the U.S. Bureau of the Census, of the total Nogales population reported in 2010 of 20,837 persons, a total of 19,793 persons, or 95 percent, were Hispanic or Latino, with only 1,044 persons, or 5.0 not Hispanic or Latino.



City of Nogales General Plan

Average Household Size

The 2000 Census reports an average household size of 3.45 people per household for that year in Nogales while the 2010 Census reports an average household size of 3.12 people per household for that year in Nogales, indicating a slight decrease in household size. When compared to the average household size of 2.63 in Arizona for 2010, and of 2.58 national average household size, the Nogales figure for the same year may be a strong indicator of a family structure more typical of Hispanic or Latino families, where extended family households are more common.

Housing Need to Support the Projected Population

Based on population projections included in the Nogales Demographic Profile chapter of this report and the housing units reported in this chapter, housing needs can be forecasted for the planning horizon of the General Plan. The 2010 census reported a total of 7,260 housing units and the 2017 estimates reported a total of 7,376 housing units. Table 17 shows projected housing units using U.S. Census Bureau 2010 housing counts and 2017 housing estimates as the base years to calculate the increment annual change.

Table 17
Nogales Housing Needs Projections
2020 - 2050

Place	2010	2020	2030	2040	2050
Incorporated Places					
Nogales Population	20,837	23,275	25,692	27,425	28,436
Housing Units	7,260	7,425	7,590	7,755	7,920
Additional Housing Needs	0	165	165	165	165

Source: US Census Bureau 2010 population and housing counts and Arizona Department of Economic Security, Research Administration, Population Statistics Unit, Population Projections for 2019 and Beyond.¹⁷

Based on Table 17, the Nogales will need approximately 660 additional housing units by 2050 to support the projected population. Assuming an average density of 4 dwelling units per acre, a total of 165 additional residential acres will be needed by 2050 to support the projected population.

As a note of caution, these figures are based on available data and municipalities located in the Arizona/Mexico border tend to have lower Census survey participation. Lower Census participation yields to lower counts. Decennial counts are used to calculate estimates and projections. Population and housing data included in this report should be used as a guide. Such data should be revised with more accurate data when the 2020 Census is released, which may not happen until 2022 for smaller municipalities.

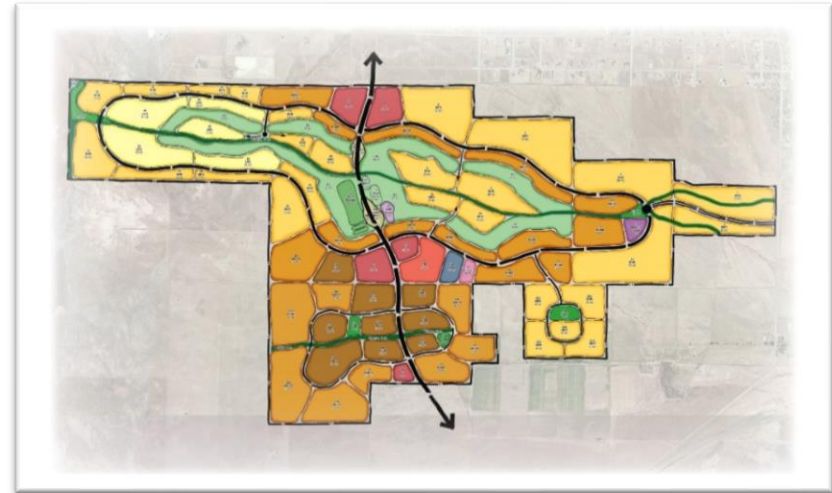
¹⁷ **Note:** Arizona Department of Economic Security Population Projections are the most recent available projections approved by the State. These projections incorporate U.S. Bureau of the Census, 1990, 2000 and 2010 decennial counts.



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Housing Need to Support Healthy Growth and Expansion

Federal employees working for a variety of government entities in Nogales endure daily commute times due to the lack of master planned communities offering the housing diversity and the amenities desired. To stimulate healthy and needed growth, the City is readily working to attract the type of residential development needed to stimulate the Nogales economy.





City of Nogales General Plan

Parks, Recreation, Trails and Open Space

Nature and Outdoors



Visitors to Nogales are sometimes startled to see the wooded hills and waving grasslands, so different from their sandy desert expectations of southern Arizona. The region is characterized by “sky islands,” the ridges of mountains rising from the valley floors of the “basin and range” landscape.

Coronado National Forest Nogales District

The Coronado National Forest is a United States National Forest that includes an area of about 1.78 million acres (7,200 km²) spread throughout mountain ranges in southeastern Arizona and southwestern New Mexico. It is located in parts of Cochise, Graham, Santa Cruz, Pima, and Pinal Counties in Arizona, and Hidalgo County in New Mexico.

The national forest is divided into five ranger districts, which are not contiguous; each consists of multiple sky island mountain ranges.

The Nogales Ranger District comprises four mountain ranges north and west of Nogales, Arizona. These ranges are the Santa Rita, Tumacacori, Pajarito, and San Luis Mountains. Included in this area are Mount Hopkins, Mount Wrightson, and Madera Canyon, all located in the Santa Ritas. In the early 20th century, this area included two national forests which were absorbed into Coronado: Santa Rita National Forest and Tumacacori National Forest.

Sky Islands

Nature organizes itself in vertical neighborhoods in the sky islands, with ecosystems changing every thousand feet or so from the valley floor to the mountain peaks. Well-marked hiking trails radiate in every direction for every level of experience. Pick your distance. Pick your degree of difficulty. Make it an hour along the old rail bed, a day in the Coronado National Forest, or a week in the back country along the state-long Arizona Trail. More than 200 varieties of birds live in this ecosystem or pass through it in annual migrations, making bird watching a common, and successful, endeavor in any season. Cycling enthusiasts flock to Nogales, making time along the rolling roadways or riding the mountain trails. Fishing in well-stocked lakes is another “desert” surprise around Nogales.



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Pajarita Wilderness (Nogales District)

The Pajarita Wilderness within the Coronado National Forest Nogales District encompassed a total of 7,553 acres and is managed by the Forest Service. All of the Wilderness is in the state of Arizona. In 1984 the Pajarita Wilderness became part of the now over 109 million acre National Wilderness Preservation System. In wilderness, you can enjoy challenging recreational activities and extraordinary opportunities for solitude.

Two major trails lead into the Pajarita Wilderness, the only Wilderness in the Coronado National Forest not located on the high slopes of a mountain range. The Sycamore Canyon Trail #40 leads downstream in that showplace of biological diversity, past riffles and pools that hold water year-round. The Border Trail #45 skirts the international border from the Summit Motorway, a rough 4-wheel drive road that parallels the eastern edge of the Wilderness, to a junction with the Sycamore Canyon Trail #40.

Tumacácori National Historical Park

Mission San José de Tumacácori is located on highway I-19 about 18 miles north of Nogales, and was first listed in 1691 as an outlying visita (a mission station without a resident priest) by the famous Jesuit missionary Father Eusebio Francisco Kino. By 1701, the village was a visita of the mission at Guevavi, and in 1771, Tumacácori was made the head mission of the district, and Guevavi was abandoned. San Cayetano de Calabasas is the adobe remnants of a site first occupied about 1756 as a Spanish mission visita. Father Pedro Font held mass here on October 17, 1775, as the expedition moved toward Tubac. Construction of the present mission church was begun around 1802. The visitor center is a National Historic Landmark and includes a museum. Visits to Calabasas and Guevavi can be arranged at the park's headquarters. A trail connects Tumacácori and Tubac along the Santa Cruz river through beautiful riparian habitat containing cottonwoods and mesquite. Look for several large ramadas enclosing interpretive panels about Anza's expeditions and the natural history of the area.

Juan Bautista de Anza National Historic Trail

In 1775-76, Juan Bautista De Anza led some 240 men, women, and children on an epic journey to establish the first non-Native settlement at San Francisco Bay. Today, the 1,200-mile Juan Bautista de Anza National Historic Trail connects history, culture, and outdoor recreation from Nogales, Arizona, to the San Francisco Bay Area.



The Juan Bautista de Anza National Historic Trail starts here. Anza began recruiting settlers and soldiers in the Spring of 1775. They assembled in San Miguel de Horcasitas (now in Mexico) and departed on September 29, 1775, heading north. The final assembly was at Tubac Presidio, where they left Spanish civilization behind and traveled 890 miles to Monterey, California.



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Tubac Presidio State Historic Park

Anza served as the Presidio de San Ignacio de Tubac's second commander from 1760-1776. About fifty cavalymen were stationed at this remote outpost, founded in 1752 in response to an uprising by the local Akimel O'odham (Pima) tribe. Anza's house, made of adobe bricks, was located here in what is now Tubac Presidio State Historic Park (four miles north of Tumacácori, Tubac Rd. and Presidio Dr.). The adjacent area was the old Tubac Barrio (community). Today, it's managed by the Archeological Conservancy, and they arrange visits. A group called Los Tubaqueños offers period interpretation at the park. A re-enactment of the expedition's passage through Tubac takes place annually during the Anza Days.



Tubac Presidio State Historic Park, a short drive away from Nogales.



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Opportunities for Eco-tourism

Nogales USA, "A Greater Nogales Coalition" in partnership with the Greater Nogales Santa Cruz County Port Authority, Nogales Community Development, Nogales-Santa Cruz County Economic Development Foundation features nature and outdoors under its recreation and travel economic development initiatives.

The coalition describes Nogales, Arizona, as "a natural wonder and a living example of cross-cultural vitality." It provides a picture of a destination, a "community that took root long ago in a narrow mountain pass that encouraged north-south travel through a steep, rugged landscape." And it describes flat, well-watered valleys on either side. "The elevation of 4,000 feet moderated the heat of the day. Good water. Good weather. A perfect place, an oasis meeting many human needs. And so, it is today."¹⁸

"Located only 70 miles south of metropolitan Tucson, Nogales presents a face that is both foreign and familiar, easy to get to but feeling like a place apart. The border here is a byway, not a barrier. Laughter and music are heard on either side, and friendly faces smile and nod in passing. The influences of Hispanic, Mexican, European, native, and Anglo cultures are seen, felt, and tasted everywhere in and around Nogales. History is part of our everyday lives. And, with an average daily temperature of 60oF and 350 days of sunshine every year, Nogales invites an outdoor life, an international attitude, and a sense of adventure."¹⁹



Sycamore Canyon, Pajarita Wilderness

¹⁸ Nogales USA website, Recreation and Travel section at nogalesusa.com

¹⁹ Ibis.



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Parks and Recreation

The City of Nogales owns and maintains two community parks for family gathering, Teyechea Park (behind City Hall) and Anza Park. The City maintains tennis courts at two separate locations: Madison Tennis Courts located at 100 E. Madison (Next to War Memorial Stadium); and Anza Tennis Courts located at 1020 N. Kitchen St. (Directly west of the Cemetery). Teyechea Park is in Phase II of some major park improvements.

The City operates and maintains a multipurpose recreation center and maintains two public swimming pools. One is located at the Recreation Center and the other is located on the campus of Wade Carpenter Middle School. The City operates and maintains one baseball field, one little league field, two junior size baseball fields and two soccer/multi-purpose fields. In partnership with NUSD #1, the City constructed a soccer field with walk around track on the campus of Challenger Elementary School. The field is used by students during the school day. All additional use is scheduled thru the City's Parks and Recreation Department. The use of these fields is mainly for league, program, tournament play, and large community special events. Practice on these fields usually runs concurrent with each particular sport. Practice time may be reserved if the field(s) are available.





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Table 18
Existing Parks in the City of Nogales
Recreation Facilities Inventory

Park Name	Picnic Tables	Benches	Sports fields	Tennis Courts	Basketball/Racquet Courts	Bleachers	Misc.
Hohokam Field	-	-	Soccer Field	-	-	2	Walking Track
Ron Turley Field	-	-	Soccer Field	-	-	-	-
Fleischer Fields	2	6	2 BA/SB Fields	-	-	7	Concession Stand
Challenger Field	-	-	Soccer Field	-	-	-	Walking Track
Monte Carlo Park	6	6	-	-	1 Basketball ½ Court	-	(1)Play Structure
Meadow Hills Park	1	5	-	-	1 Basketball Court	-	(1)Play Structure
Anza Park	6	7	-	2	2 Racquet Courts 1 basketball Court	-	(1)Play Structure
Camp Little Park	8	20	-	-	1 basketball Court	-	Multiple Play Structures
Teyechea Park	14	5	Baseball Diamond Sand volleyball	-	1 Basketball Court	-	(1)Play Structure
Cordova Park	-	4	-	-	-	-	Spray pad
Streetscape (BT)	-	1	-	-	-	-	-
Harold Park	-	2	-	-	-	-	-
Karam Park	2	10	-	-	-	-	1 Gazebo
Court Park	-	5	-	-	-	-	-
Beck Park	4	4	-	-	1 Basketball Court	-	(1)Play Structure
War Memorial Park	-	-	1 Baseball Field	-	-	3	Concession Stand
Madison Park	11	4	-	2	-	-	-
Little League Field	-	-	(1) LL Baseball field	-	-	2	Concession Stand
Kino Park	-	5	-	-	-	-	-
Library Park	-	24	-	-	-	-	1 Gazebo
Skatepark	-	-	-	-	-	-	-
Pools (2)	-	8	-	-	-	-	-

Source: City of Nogales Parks and Recreation Department, 2020.



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Census 2020: Significance for Nogales

A U.S. Census Bureau report released in 2015, titled [*Projections of the Size and Compositions of the U.S. Population: 2014 to 2060*](#), provides an in-depth analysis of the nation's population looking forward to 2060, including its size, composition across age, sex, race, Hispanic origin and nativity. According to this report, the minority population is projected to rise to 56 percent of the total in 2060, compared with 38 percent in 2014. While one milestone would be reached by the 2020 Census, another will be achieved by the 2030 Census.

It is of vital importance for the City of Nogales to continue to encourage participation in the 2020 Census in order to confirm the City's population and household composition and to be able to increase the City's revenue by making everyone count. Better counts also lead to more accurate planning for land use, housing, amenities, infrastructure, facilities and services.

Growth-related Considerations

According to the U.S. Government Accountability Office (U.S. GAO) reports, U.S. Customs and Border Protection (CBP) increased its emphasis on recruitment by establishing a central recruitment office and increasing its participation in recruitment events. As a result, the number of applications it received for law enforcement positions across its operational components—the Office of Field Operations, U.S. Border Patrol, and Air and Marine Operations—from fiscal years (FY) 2013 through 2017 more than tripled.²⁰

The same reports states that the number of Border Patrol agents hired in the first half of FY 2018 increased by about 83 percent when compared to the same period for FY 2017. Additionally, Executive Order 13767, issued in January 2017, called for CBP to hire 5,000 additional Border Patrol agents, subject to available appropriations.

Consistent with this directive, Border Patrol is aiming to attain a staffing level of 26,370 Border Patrol agents (5,000 agents above the fiscal year 2016 statutorily established level). It is safe to assume that being the largest POE in Arizona along the US/Mexico border, Nogales will benefit from an increase in Border Patrol agents. More Border Patrol Agents means additional housing needs. And additional housing needs require additional lands for residential development.

The Greater Nogales Santa Cruz Country Port Authority is eagerly pursuing regional competitiveness through various strategies, including:

- The need to modernize the DeConcini as the main pedestrian crossing for Nogales to reduce continual pedestrian and vehicular delays which are an impediment to frequent crosses, which negatively impacts Downtown retail;
- Expansion of SENTRI lanes Downtown essential for daily commuters;
- Supporting efforts to deploy SENTRI at Mariposa, essential for Maquila industry;

An addition to Nogales's commitment to competitiveness as a principal gateway for trade, tourism and innovation with a \$250 million investment in modernizing the DeConcini Port of Entry, other improvements include the SR 189: International Border to Grand Avenue project currently identified in the ADOT Five-Year Transportation Facilities Construction Program.

²⁰ U.S. Customs and Border Protection, United States Government Accountability Office GAO Highlights, , 2018



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The State Transportation Board allocated \$2 million for environmental work in fiscal year (FY) 2016 and \$4 million for design in FY 2018. Funding was originally programmed in the 2020–2024 Development Program for \$64 million in FY 2021. In September 2016, a \$25 million appropriation was passed by the Arizona Legislature. In addition, \$40 million in federal funds will go toward SR 189 improvements for construction to begin in FY 2019.

Conclusions

In sum, numerous organizations, agencies, and government entities at the international, federal, state, regional and local levels are providing invaluable resources to support a dynamic region and to support a premier US/Mexico Gateway for trade, tourism and innovation. All these efforts will translate into additional growth and expansion that is not documented in population and housing projections based on past trends.

As Arizona's premier international port of entry, Nogales, Arizona, addresses a multiplicity of issues at international, national, regional, and local levels. With a wear and tear equivalent to that in the City of Phoenix, a large metropolitan area, and the budget of a small Arizona border community, the City manages the complexities of issues enumerated in this report with a tight budget.

To secure its long-range viability, the City must support managed growth in order to remain sustainable. This requires the implementation of an economic development strategy that aids in securing self-sufficiency.

SEAGO, Santa Cruz County and the City of Nogales, and the City of Nogales, Sonora, must continue to work in partnership to support and enhance the quality of life of City of Nogales, Ambos Nogales, Santa Cruz County and the region

To be able to support sustainable growth, the City of Nogales must act strategically. The future of the region depends of what happens in Nogales. A strong annexation strategy that allows the City to sustainably manage growth and increase the revenue share while increasing the quality of life is an appropriate tool for achieving success.



Technology and Innovation



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